DOCUMENT RESUME

ED 058 416 VT 014 414

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TITLE Planning the Implementation of a Business Education Learning System. Final Report.
INSTITUTION Texas Tech. Univ., Lubbock. Dept. of Business Education.
SPONS AGENCY Texas Education Agency, Austin.
PUB DATE Jul 71
NOTE 117p.

EDRS PRICE MF-$0.65 HC-$6.58
DESCRIPTORS *Business Education; College Bound Students; *Curriculum Development; Job Analysis; *Learning Laboratories; Noncollege Preparatory Students; Office Occupations Education; Post Secondary Education; Program Development; Programed Instruction; Research Projects; Simulation; *Systems Approach; Teacher Education; Team Teaching
IDENTIFIERS BELS; *Business Education Learning System

ABSTRACT

Developed as a performance-based plan, the Business Education Learning System (BELS) proposes ways to prepare non-degree students for office occupations and to prepare degree students for teaching and administrative positions. Special features designed into the system include: (1) the Office Service Center (OSC)--an actual campus business operated by supervised students, (2) the use of innovative instructional materials such as learning activity packets, simulation projects, and programed modules, (3) the use of team teaching, and (4) the ability to adapt the system to various educational settings--universities, 2-year colleges, secondary schools, or special programs. In one section of this final report, plans are described for implementing BELS, including work to be performed in the OSC and the identification of task-oriented programed materials applicable to BELS core courses. Also discussed are procedures for developing OSC-related materials such as job descriptions, office procedures, job manuals, and office forms. Future development will encompass competency tests, task lists, and an instructional materials institute. A related document is available as VT 014 415. (JS)

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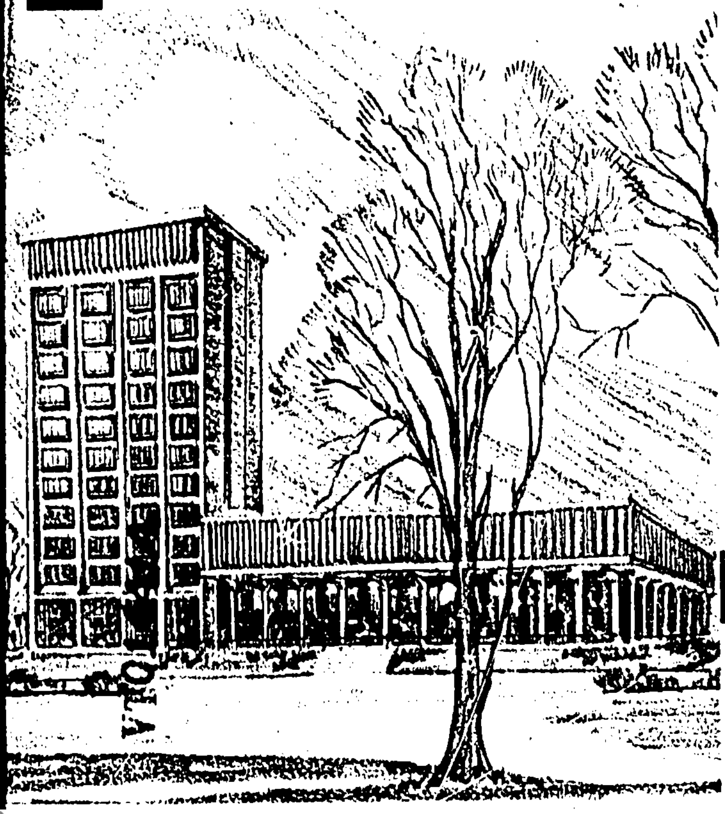

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Final Report

Texas Education Agency
Project No. 11635

PLANNING THE IMPLEMENTATION OF A BUSINESS EDUCATION LEARNING SYSTEM

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July, 1971

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July 30, 1971

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Here is the final report for PLANNING THE IMPLEMENTATION OF THE BUSINESS EDUCATION LEARNING SYSTEM, Texas Education Agency Project #11635.

Planning the project and writing the report was a stimulating professional experience for all of the researchers who participated. We appreciate the opportunity that your office made possible through this contract.

So that we can move to the next phase of implementation, we would like to meet with you as soon as you have read the report. I will get in touch with you sometime during the week of August 2.

William R. Pasewark

William R. Pasewark

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PREFACE

The Business Education Learning System described in this report is a unique method to prepare many different types of people, learning together, for living and working in our business-oriented American democracy.

BELS was conceived by researchers who, themselves, profited from the opportunities offered in our American education system. It was planned to help overcome our country's serious domestic problem of social unrest, which is caused by the tragic sequence of inadequate and/or inappropriate education, which produces unemployment and, in turn, results in poverty. In the future, the BELSystem will be developed and implemented in the spirit of strengthening and broadening two of the most important segments of our modern society: education and business.

Many persons and organizations have contributed to the planning of the Business Education Learning System. This is not surprising, because just as American democracy is an exciting, comprehensive, multi-facited, dynamic institution which encourages active participation and contributions, so is the BELSystem. Therefore, the System may be regarded as an educational innovation representative of our American way of life.

The researchers value the contributions of all to the project and invite further participation as we move from the planning to the developing stage of BELS.

William R. Pasewark
Project Director
Texas Tech University
July, 1971

TABLE OF CONTENTS

Part — Page

Transmittal Letter ii

Preface iii

I. DESCRIPTION OF THE BUSINESS EDUCATION LEARNING SYSTEM (BELS) . 1

  Objectives 1

  Description 2

  Features and Advantages of the Business Education Learning System 6

    Educational Features 6
    Advantages 9
      To students 9
      To administrators 11
      To businessmen 12
      To society 13
      To business teachers 13
      To researchers 14

II. PROJECT OBJECTIVES 16

III. PLANS FOR IMPLEMENTING BELS 24

  Work to Be Performed in the OSC 24

  Distribution, to BELS Core Courses, of Prerequisite Office Education Learnings Implied in Statements of Work to be Performed 39

  Identification of Task-Oriented Programmed Instructional Materials Applicable to BELS Core Courses 54

  Departments and Positions in the OSC 59

    Degree Students 59
    Non-Degree Students 65

  Location and Layout of the OSC 67

  OSC Equipment 67

  Financial and Advisory Support for Future BELS Research, Development, and Implementation 69

Part Page

Financial 69
Advisory 74

IV. PROCEDURES FOR DEVELOPING OSC-RELATED MATERIALS 78

Work Input 78

Live work 78
Simulated work 79

Job Descriptions 80

Office Procedures and Procedure Flow Charts 86

Job Manuals 87

Office Forms 88

Office Manual 89

V. PLANS FOR FURTHER DEVELOPMENT OF BELS (FALL, 1971, THROUGH SUMMER, 1972) 90

VI. PROJECT PERSONNEL 92

APPENDICES

A. GLOSSARY 93

B. JOB ANALYSIS 97

C. JOB INFORMATION 101

D. OFFICE PRODUCTS CATEGORIZATION 104

E. STUDENT QUESTIONNAIRE 106

F. TALLY SHEET 108

LIST OF FIGURES

Figure | Page

1 BUSINESS EDUCATION LEARNING SYSTEM 3

2 OFFICE SERVICE CENTER ORGANIZATIONAL CHART, DEGREE PROGRAM 60

3 OFFICE SERVICE CENTER ORGANIZATIONAL CHART, NON-DEGREE PROGRAM 66

4. OFFICE SERVICE CENTER LAYOUT 68

LIST OF TABLES

Table | Page

1 DISTRIBUTION, TO BELS CORE COURSES, OF PREREQUISITE OFFICE EDUCATION LEARNINGS IMPLIED IN STATEMENTS OF WORK TO BE PERFORMED 40

2 ESTIMATED COST OF EQUIPMENT NEEDED FOR OSC 70

3 PROJECT PERSONNEL 92

I. DESCRIPTION OF THE BUSINESS EDUCATION LEARNING SYSTEM

The Business Education Learning System (BELS)[1] is a comprehensive, integrated, performance-based plan for educating both degree and non-degree students. Before the implementation of BELS could be planned in detail, it was necessary to identify the major objectives to be accomplished by the System.

Objectives

The major objectives of the Business Education Learning System are to prepare non-degree students for careers as office workers and to prepare degree students for careers as business teachers or administrative managers.

Both non-degree and degree students will be preparing for careers vital to the economic and social progress of the State of Texas and our country.

1. Non-degree students will prepare for positions as office workers and will be enrolled in special programs. These students may include:

    a. Handicapped students
    b. Disadvantaged students
    c. Students in one- and two-year programs
    d. Bilingual students
    e. Employee and student preservice and in-service training
    f. Vocational rehabilitation students
    g. Returning veterans
    h. Adults

2. Degree students will prepare for positions as:

    a. Business teachers in a variety of programs and institutions including:

        (1) Educational institutions, such as junior high schools, senior high schools (comprehensive and technical), junior colleges, senior colleges and universities, and private business schools

        (2) Special programs, such as Job Corps, Manpower Development Training Act, and Neighborhood Youth Corps

---

[1] BELS, Business Education Learning System, and BELSystem will be used interchangeably throughout the report. For definitions of other business and office terms, refer to the Glossary (See Appendix A, page 93).

(3) Preservice and in-service training programs in companies

b. Administrative managers, including administrative assistants, executive secretaries, office administrators, office managers, and office systems analysts

Description

The Business Education Learning System is diagrammed on page 3. To clarify the movement of students through the System according to their degree objectives, Block Code and Line Code legends are presented.

Block Code

1. 1a Degree Students, beginning with their Sophomore year, will take five required courses preparing them to be business teachers or administrative managers. Included are the following:

a. 3a The Office Production course develops competencies that will be necessary to perform office work in the Office Practicum course 3b . Students work in the Office Service Center (OSC) to earn credit in the Office Practicum course. Successful performance on appropriate competency tests for each position will be prerequisite to being "hired" for that OSC position. In other words, advancement to Office Practicum, i.e. to OSC positions, from the Office Production course is based on evidenced competencies rather than the traditional procedure of length of time in a course.

b. 3b The Office Practicum course is conducted in the Office Service Center 4 where Sophomore Degree Students 1b complete "live" work from offices on campus and from businesses off campus 6a . Simulated Work 6b will be introduced when necessary to give students experiences not provided by "live" work.

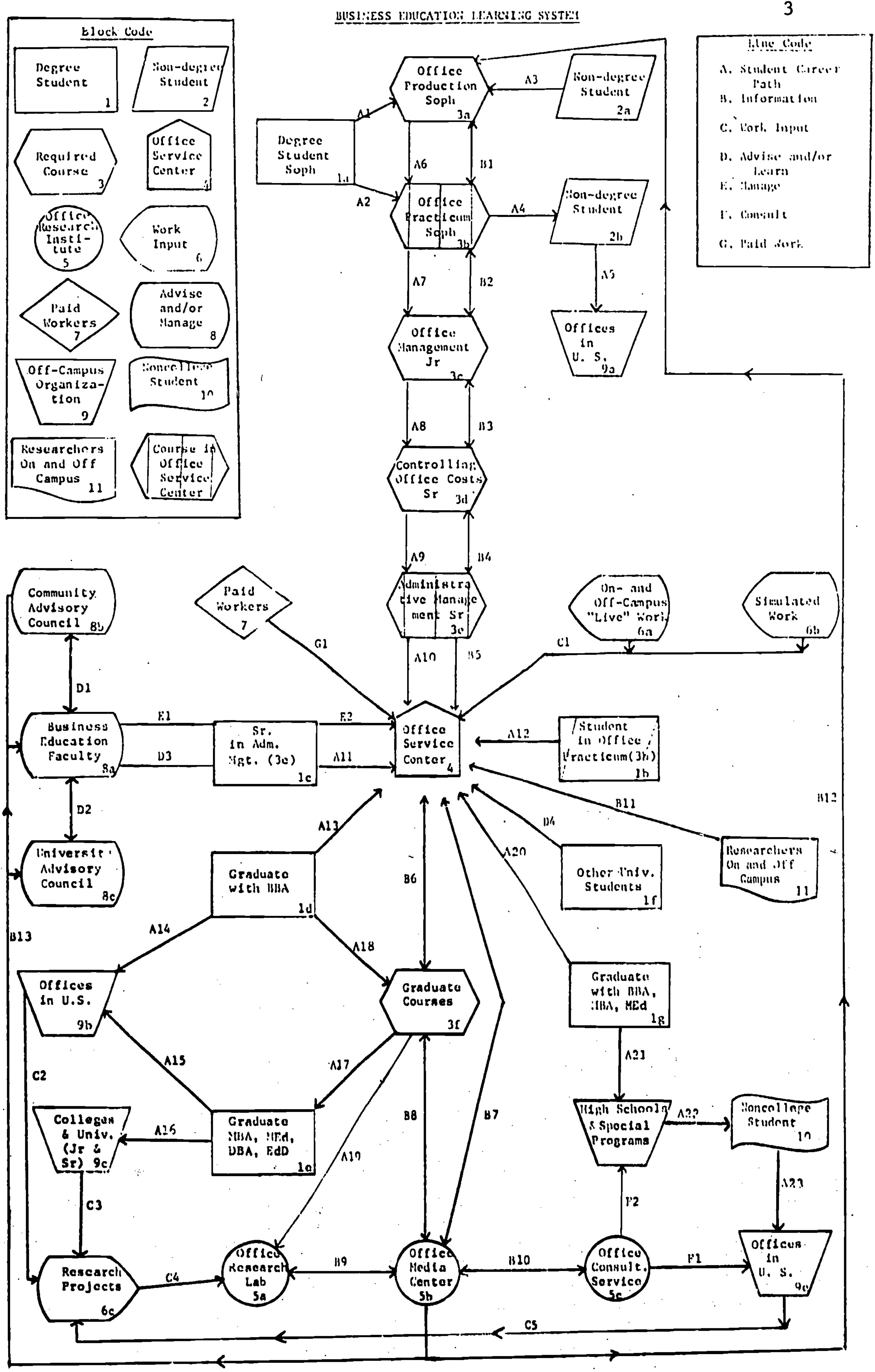
c. 3c Office Management is a basic junior-level course to develop the student's understanding of how planning, organizing, actuating, and controlling functions apply to the office.

d. 3d Controlling Office Costs is a senior course to develop the student's understanding of how the measurement and control of office costs can decrease expenses and increase profits.

e. 3e Seniors in the Administrative Management course will supervise students in the Office Practicum course and some Paid Workers 7 in the Office Service Center. Seniors in the Administrative Management course will have the unique and enriching experience of supervising others and analyzing and improving the Center. Their performances will be evaluated by student workers enrolled in the Office Practicum course and by professors. Sophomore degree students in the Office Practicum course should be highly motivated, knowing that as seniors in the

Fig. 1

BUSINESS EDUCATION LEARNING SYSTEM


Block Code
Degree Student 1
Non-degree Student 2
Required Course 3
Office Service Center 4
Office Research Institute 5
Work Input 6
Paid Workers 7
Advise and/or Manage 8
Off-Campus Organization 9
Noncollege Student 10
Researchers On and Off Campus 11
Course in Office Service Center
Line Code
A. Student Career Path
B. Information
C. Work Input
D. Advise and/or Learn
E. Manage
F. Consult
G. Paid Work
Office Production Soph 3a
Degree Student Soph 1a
A1
A2
A3
Non-degree Student 2a
A6
B1
Office Practicum Soph 3b
A4
Non-degree Student 2b
A5
Offices in U. S. 9a
A7
B2
Office Management Jr 3c
A8
B3
Controlling Office Costs Sr 3d
A9
B4
Administrative Management Sr 3e
A10
B5
Paid Workers 7
G1
On- and Off-Campus "Live" Work 6a
Simulated Work 6b
C1
Community Advisory Council 8b
D1
Business Education Faculty 8a
E1
D3
Sr. in Adm. Mgt. (3e) 1c
E2
A11
Office Service Center 4
A12
Student in Office Practicum (3b) 1b
B11
B12
D2
University Advisory Council 8c
A13
Graduate with BBA 1d
B6
D4
A20
Other Univ. Students 1f
Researchers On and Off Campus 11
B13
A14
A18
Offices in U.S. 9b
Graduate Courses 3f
Graduate with BBA, MBA, MEd 1g
A15
A17
A21
C2
Colleges & Univ. (Jr & Sr) 9c
A16
Graduate MBA, MEd, DBA, EdD 1e
A19
B8
B7
High Schools & Special Programs
A22
Noncollege Student 10
F2
A23
C3
Research Projects 6c
C4
Office Research Lab 5a
B9
Office Media Center 5b
B10
Office Consult. Service 5c
F1
Offices in U. S. 9d
C5

Administrative Management course they will be responsible for supervising the Office Service Center.

2. 2a Non-degree Students are those preparing for office positions and those presently employed who are improving their competencies, but not enrolled at Tech for a baccalaureate degree. These students would be in special programs, including: Texas Tech office employees preservice and in-service training programs; one- and two-year office education programs; programs for returning veterans; and programs with business and government agencies for training youth and adults. Education for both youth and adults would include programs for the disadvantaged and handicapped, for vocational rehabilitation, and for bilingual students. They would use the same facilities as degree students, but instruction would be developed to meet the needs and capabilities of the special group of students involved. After this training they are employed in Business Offices in the U. S. 9a.

3. 4 The Office Service Center will be conducted on campus and organized as an actual business service company. The Center will be a cynosure for all American offices. In fact, it should evolve into the best managed office in the United States, because it will have been studied and improved upon by many students, faculty, businessmen, and researchers. The number of arrows directed toward the Center in the chart emphasizes this point.

4. ⑤ The objective of the Office Research Institute is to increase office efficiency, as Schools of Agriculture have improved farm efficiency, and Industrial Management departments have improved factory efficiency. There is no university now doing this type of research. The Institute will have three parts:

a. (5a) The Office Research Lab will conduct basic research in a laboratory. Research Projects 6c will come to the Lab from Business Offices in the U. S. 9b and 9e and Colleges and Universities 9c.

b. (5b) The Office Media Center will collect, prepare, classify, and disseminate information in the form of written materials, visual aids, audio aids, and models. It will be the depository for information developed in the Office Service Center, the Office Research Lab, and the Office Consulting Service (5c). The faculty and students will prepare programmed instructional material, training loops, and video tapes based on actual work and instructional activities in the Office Service Center. These instructional materials can be used throughout the state and country for office occupations programs.

c. (5c) The Office Consulting Service will provide information to Business Offices in the United States 9e for consulting fees. Information that consultants acquire while employed by business will be fed back into the Office Media Center.

5. 7 Full-time and part-time Paid Workers will be employed to maintain continuity when students are not operating the Office Service Center.

6. 8a The Business Education Faculty will supervise senior students who will be managing the Office Service Center. To plan for, develop policy, and evaluate the Office Service Center, the Business Education Faculty will periodically meet with two groups:

a. 8b The Business Advisory Council, with representation from business, students, parents, high school business teachers, junior college teachers, community agencies, the Administration Management Society, and the Texas State Legislature.

b. 8c The Tech Advisory Council with representation from areas related to office production and behavior: Sociology, English, Psychology, Engineering, Special Education, Foreign Languages, and Classified Personnel.

7. 9a 9b 9e Business Offices in the U. S. employed 13,500,000 full-time office workers in 1970. Many persons not classified as full-time office employees (editors, executives, lawyers, salesmen, and teachers) spend much of their time in office activities.

a. Non-degree Students 2b would perform office work.

b. Graduates with BBA degrees 1d would manage offices after acquiring appropriate experience and maturity.

c. Graduates with BBA, MBA, or MEd degrees 1g would teach in Junior and Senior High Schools or in Special Programs 9d where they would educate Noncollege Students 10 who would become gainfully employed in Business Offices in the U. S. 9e .

d. Graduates with MBA, MEd, DBA, or EdD degrees 1e would manage offices 9b or teach in Colleges and Universities 9c.

8. 1f Other Tech Students enrolled in related courses would offer advice to the Office Service Center related to the subjects they were studying. For example:

a. Advertising students would advise Administrative Management students managing the Office Service Center on how to advertise the services offered by the Center to campus offices, students, and faculty, and to downtown businesses.

b. Special Education students would advise on planning and conducting training programs for disadvantaged and handicapped students.

9. 11 Researchers On and Off Campus in other disciplines could use the Office Service Center as a laboratory to study people learning and working together and individually. The Center will have a one-way glass, video tape, and tape recording equipment. The Office Research Lab will have measuring devices. Knowledge about measuring and controlling human activity in the office will be developed in undergraduate and graduate Business Education courses.

10. <3f> Graduate Courses may include:

Advanced Administrative Management
Advanced Office Practicum
Administration and Supervision of Vocational Education
Cooperative Vocational Education Programs
Development of Instructional Materials
Foundations of Business Education
Instructional Strategies
Office Administration and Supervision
Office Instructional Media
Office Simulation
Office Supervision
Organization of Learning for Business
Seminar in Business Education
Teaching Business Subjects

The Office Service Center will be a laboratory for graduate students in which to do research about the office.

Line Code

1. Degree Students ordinarily enroll in Office Production (A1), but they can proceed directly to Office Practicum (A2) if they pass the necessary competency tests.

2. Information about the office and about students flows freely from course to course (B1-B4) and from courses to the Office Service Center (B5). This is desirable because the Office Service Center is the focal point of the system and competencies must be developed in all undergraduate courses to make the Office Service Center operate effectively and efficiently. Information from the Office Service Center will flow into and be stored in the Office Media Center (B7). Information is exchanged between the Office Research Lab, the Office Media Center (B9), and the Office Consulting Service (B10).

Information moves from the Office Media Center (the reservoir of all information about the office) to the Business Education Faculty, the Business Advisory Council, and the Tech Advisory Council (B13). This should result in a constant updating of systems and procedures in the Office Service Center.

Information about corrections, additions, and deletions in the Office Service Center is also recycled to all of the undergraduate courses (B12).

Features and Advantages of the Business Education Learning System

Educational Features

1. The Business Education Learning System exemplifies the systems approach to education. As such, it is a self-correcting developmental

system of curriculum renewal and thus may be a prototype for learning systems in other vocational and non-vocational areas.

2. The focal point of the Business Education Learning System is the Office Service Center, an actual business operated on campus for a profit. In the Center, students will obtain realistic educational experiences by performing "live," generated, and simulated tasks on the job.

3. The educational program offered within the BELSystem is performance-based; that is, performance required in the students' career objectives determine the nature of the educational experiences offered within the System. The tasks to be performed in the OSC were identified, originally, on two bases: (a) a job analysis of Lubbock office positions, and (b) a survey in which students at Texas Tech University reported the types of office work they would pay to have performed by Center employees. Eventually, when the necessary research has been completed by NOBELS, OSC tasks will be based on a job analysis conducted in business offices located throughout the United States.

4. In the Office Service Center, students and the instructor work together to operate a company. This is in contrast with many traditional courses in which the students and the instructor are not aware of a common goal for the course.

5. Traditional educational programs divide the learning experiences of students into segments; the OSC provides an opportunity for the students to integrate their knowledges, skills, and personal qualities into a meaningful, yet controlled, work experience.

6. The Office Service Center provides an educational laboratory in which to experiment with many educational methods, instructional media, theories, materials, curricula, and philosophies, many of which are applicable to other disciplines. These include:

a. Programmed instructional materials
b. Advisory committees
c. Educational advancement by competency rather than by time in a course
d. Sophomores and seniors in the same course
e. Self-correcting educational system
f. Student participation in educational programs

7. The organizational structure of the Office Service Center can be adjusted to include appropriate positions to accommodate the educational aspirations, as well as the career objectives, of a variety of students; for example, degree, non-degree, disadvantaged, handicapped, adults, and minority. The OSC, therefore, provides for flexibility in the System.

8. Since students are interacting in the OSC with many types of people in various office situations, the Center provides an ideal atmosphere for developing attitudes and personal qualities not easily taught in a classroom situation.

9. The Office Service Center will provide an observable controlled laboratory to study manpower in action.

10. One of the important goals of education is to answer the needs of the economy. The Office Service Center will provide more capable, thus more productive, workers for business offices. Since no business decision is better than the information upon which it is based and since the office provides this information, the function of the office is becoming increasingly significant to profit-minded businessmen.

11. Since Business Education faculty observe students working in the OSC, they get feedback on the effectiveness of teaching efforts expended in BELS courses. Any adjustments to teaching methods and techniques recognized to be necessary can be made immediately.

12. Senior students will get experience in actually managing people in the OSC, and they will be evaluated on their ability to manage.

13. The Center provides unusual opportunities for mutual give-and-take in the educational experiences and career objectives of both non-degree and degree students who work together as a productive team in the OSC. Thus, the traditional separation of these groups is eliminated.

14. The Office Service Center combines many of the benefits of cooperative and directed work experience programs with those of conventional educational approaches.

15. Teachers may satisfy work experience requirements by enrolling in Advanced Office Practicum or Advanced Administrative Management. While enrolled in these courses, graduates will work in positions of highest responsibility in the OSC.

16. Students advance from the Office Production classroom to the on-the-job Office Practicum course on the basis of competencies exhibited on tests rather than by amount of time spent in the Office Production course.

17. Students participate with faculty and other program developers to improve their own curriculum. Based on difficulties they encounter in performing satisfactorily in the OSC, students will make recommendations for the revision of previous educational experiences.

18. The OSC can be considered a vital tool with which curriculum can be constantly renewed. Through evaluation of the students' performances in the Center, the relevancy of the educational experiences required in the program (including some General Education, Professional Education, Business Administration, and Business Education courses) can be determined. Therefore, the OSC may be considered a quality checkpoint in the educational system similar to an inspection checkpoint in a factory. On the basis of conclusions made from observing students as they perform work in the Center, curriculum revisions can be made.

19. Innovative instructional materials, including self-teaching tools such as unipacs, learning activity packets, content packages,

written programmed modules, task simulation projects, TV tapes, film loops, tape cassettes, motion films, filmstrips, slides, and video tapes, can be developed for the System, evaluated in the System, and published for use by other educational institutions, as well as for in-company training programs.

20. Articulation with office administration courses in junior colleges is improved. Even though very few of the required BELS courses are typically offered in junior colleges, competencies students may have acquired before entering Texas Tech can be recognized through results on competency tests administered in the Office Production course.

21. The Business Education Learning System provides ample opportunities to incorporate and develop team teaching, thus providing prospective teachers the opportunity to observe and evaluate this instructional strategy.

22. Even though BELS is a comprehensive system, it is not necessary to implement all parts of the System. For example, the OSC can be implemented without the Office Research Institute.

23. The Business Education Learning System synergizes the theoretical and practical aspects of research (through the Office Research Institute and the Media Center), education (through the BELS core courses), and application (through the Office Service Center) into a meaningful, comprehensive program. Organizations which desire to improve office production are potential supporters of the program. These organizations might include:

a. Businesses in Lubbock, Texas, and the U. S.
b. Education, business education, and management professional organizations
c. Educational agencies
d. Governmental agencies
e. Management consultant firms
f. Office equipment and supply manufacturers

24. The entire BELSystem, or parts of it, can be implemented, with variations, in many different educational settings--universities, 2-year colleges, secondary schools, or special programs.

Advantages

To students

1. Undergraduate and graduate students will receive a realistic education because their educational experiences will culminate in actual work experience gained in the Office Service Center, which is an actual business operated for a profit.

2. The Center provides a model that promotes student participation in program design, operation, evaluation, and revision.

3. A student will be "hired" into the OSC from the Office Production classroom only when he passes the competency test designed for the position for which he is applying. It is conceivable, therefore, that one student could begin working in the OSC with no classroom instruction, while another student may require a semester or more of related remedial individualized instruction in the classroom before being placed in a position of responsibility in the OSC.

4. In the Office Service Center, students can immediately apply the instruction they have received in their required classes to actual office situations.

5. The Office Production and Office Practicum courses have special features whereby disadvantaged and handicapped students can:

   a. Take remedial work in some basic education areas
   b. Develop concepts of self-worth
   c. Work with different types of people
   d. Learn office behavior
   e. Observe levels of office positions

6. Senior students will get experience in actually managing people and will be evaluated on their ability to manage. This senior managerial experience, thus, will bridge the gap between school and employment in this career objective.

7. OSC manager positions provide opportunity for students to develop leadership qualities.

8. OSC students have an opportunity to identify and solve problems in an on-going business.

9. Through experience gained while occupying positions of responsibility in a profit-oriented business office, students can develop an understanding of the importance of dependability and accountability for their actions.

10. Senior students, when managing sophomores in the OSC, will be required not only to make a decision and explain and defend it to their superiors but also to plan for its implementation and follow through on its execution.

11. Students can identify, evaluate, and redesign the work flow in an established business.

12. Students will have opportunity to interact with people in situations similar to those they will be facing when employed. Some situations will be pleasant; some, unpleasant. They will develop an understanding of and empathy with many types of people working together as a business team.

13. Students can develop their sense of self-worth through a knowledge of their contribution to the efficient operation of a business office.

14. As in business, in the OSC students will have limited resources with which to perform their jobs. They can develop such traits as resourcefulness and ingenuity by utilizing their limited resources most effectively to fulfill their responsibilities.

15. Since there are positions in the OSC that require varying degrees of competency and responsibility, and since a student has opportunities for promotion, a student can be promoted into as challenging a career objective as his performance merits.

16. The OSC can provide office work experience for students who are planning to be business teachers.

17. The Business Education Learning System can be an exploratory occupational program where students obtain a career education through exposure to and development of competencies required for office positions.

18. The Personnel Division of the OSC will serve as an employment placement service for both degree and non-degree students.

To administrators

1. The entire System, or parts of it, can be a "show place" to attract off-campus recognition to the university. Each of the items listed under Educational Features can be explained in response to written inquiries or demonstrated to campus visitors.

2. The System can be a model for administrators at campuses experiencing student unrest because BELS relates to many of the students' serious concerns. For example:

- a. Student participation in curriculum planning, evaluation, and revision
- b. Implementation of a "whole" curriculum instead of listings of courses
- c. Relevancy of education
- d. Professors who are not exclusively "book-oriented"
- e. Student contact with diverse groups of society
- f. Balance between teaching and research

3. The System provides an educational laboratory in which some educational theories, such as the open classroom, can be developed and/or tested. Successful theories can be adopted by other educational programs on campus.

4. The quality checkpoint of the system, the OSC, is a unique, realistic, and convenient means by which to evaluate the entire curriculum. For example, how relevant a speech course is to a student's career can be determined by how well a manager in the OSC can make a small group presentation to other managers and workers.

5. The Business Education Learning System, through the OSC, forces the integration of compartmentalized educational units and activities into a meaningful performance-based, career-oriented program.

6. The implementation of BELS focuses faculty and staff efforts toward predetermined career-oriented educational objectives.

7. The Business Education Learning System provides optimum utilization of resources by making one facility available for many programs, activities, and people.

8. Because the System has been planned and described in detail, short- and long-range budget plans will be facilitated. This will tend to promote the judicious utilization of University resources such as space, equipment, and instructional salaries.

9. Administrators can send some of their "peak load," as well as regular, office work to the OSC for completion.

10. Some experimental office practices and procedures, if proved successful when tested in the OSC, might be considered for possible adoption in administrative offices on campus.

To businessmen

1. One of the important goals of education is to answer the needs of the economy. The Office Service Center will provide more capable, thus more productive, workers for business offices. Since no business decision is better than the information upon which it is based and since the office provides this information, the function of the office is becoming increasingly significant to profit-minded businessmen.

2. The Office Service Center provides an experimental environment where ideas, concepts, and theories from businessmen can be instigated, investigated, and verified before implementation in a business.

3. The Business Education Learning System will provide a constant infusion of better prepared office workers and office managers. More productive office workers and managers will decrease office costs. Decreased office costs should result in increased profits.

4. The Office Service Center can be instrumental in enlarging and refining the occupational proficiency of present administrative managers working in heterogeneous businesses throughout the country.

5. Data collected and verified through the Office Research Institute can be disseminated to businessmen to improve the functioning of their business offices.

6. Faculty members and graduate students may be able to do consulting work for businesses.

7. Employee turnover rate may be reduced since students in the OSC will have convinced themselves of their career choices, and their on-the-job abilities will have been measured.

To society

1. The Business Education Learning System can help educate disadvantaged citizens who aspire to positions in an office because of its "white collar" image.

2. BELS can teach the handicapped how to perform office work within their physical and/or mental limitations. By observing handicapped citizens at work in the Office Service Center, employers can realize that handicapped people can produce effectively in an office.

3. The System will orient minority groups in one- or two-year programs to the business office. By actually performing realistic tasks in the Office Service Center, minority members can develop, in a controllable educational environment, occupational skills, knowledges, and personal qualities.

4. The Business Education Learning System can help overcome poverty, one of the nation's major domestic problems, by giving appropriate education and training to citizens capable of working in present and future office positions.

5. BELS provides education and training for black women who aspire to office occupations but who are disadvantaged because of race and sex.

To business teachers

1. After working in senior managerial positions in the OSC, prospective business teachers will have a working knowledge of how a busines operates and can help their students better understand the intracompany informational and operational systems.

2. While working in an in-school business (the OSC), prospective teachers will have opportunity to systematically analyze the occupational positions for which many of their future students will be training. This opportunity is unique among teacher education programs in the country.

3. Prospective business teachers will develop an appreciation for the planning and control needed in originating and operating a profit-oriented business. They will also develop a cost-consciousness with regard to supplies, equipment, and personnel which would be virtually impossible to develop in a typical classroom situation. This cost-consciousness can then be passed on to their students when they begin teaching in educational institutions across the country.

4. By working in the OSC, teachers can develop those career competencies and personal qualities which they are endeavoring to develop in their students.

5. Through experience in managerial positions in the OSC, future business teachers will have opportunity to manage people with diversified personalties and needs prior to their initial teaching assignment, when they must manage 30 or 40 students in the classroom.

6. By identifying problem areas in the OSC and suggesting workable alternatives, future teachers will be given an opportunity to participate in office education program planning. The impact of this experience on the many educational institutions in which these graduating teachers will teach could be tremendous as they plan and implement career-oriented programs in their schools.

7. The University Business Education faculty will keep abreast of developments in business because they will be supervising students who will be managing the OSC, a profit-oriented business.

8. Prospective business teachers will get actual experience in managing and/or teaching a variety of sophomore and non-degree students, including adults, handicapped, and disadvantaged.

9. Since some tasks should be taught in the OSC instead of in the Office Production classroom (i.e., running copies on a stencil duplicator), the prospective business teacher will have the unique opportunity to conduct in-company training programs. Sometimes the training would involve only one OSC worker; thus teaching would necessarily be on a one-to-one basis. In other cases, teaching would be directed toward small groups of OSC workers. Teaching students who are on the job may be quite different from teaching in the traditional classroom.

10. The BELSystem places both Business Education faculty and senior Business Education students who are involved in training OSC employees in a situation where performance accountability will be operative. It is immediately obvious if the teacher has not "reached" his students, since their performance on the job in the OSC is immediately observable.

11. Future business teachers will have an opportunity to develop, use, and evaluate innovative instructional materials used in the System. They can thus be informed of materials available before choosing materials to incorporate into their own schools.

To researchers

1. The Office Service Center is a unique educational laboratory in which to study manpower, management, and productivity problems, all of which are critical concerns of our country.

2. The Office Service Center may help Texas Tech win research grants, since it provides researchers with a genuine laboratory in which to observe and study a variety of ubiquitous problems relating to the disadvantaged, dropouts, handicapped, and/or mentally retarded.

3. Since the Office Service Center is a working, dynamic, and changing office, it is an ideal environment in which to experiment with and observe individuals working alone and in groups.

4. Results of educational and occupational research can be published and disseminated by the Office Media Center, thus enabling both

educational institutions and businesses across the country to benefit from significant office research efforts.

5. Because the Office Research Institute is part of the same system as the OSC (business) and courses in BELS (education), there should be only a short span of time before results of research are delivered and implemented in business and education.

II. PROJECT OBJECTIVES

The major goal accomplished in this project was a plan for the further development and implementation of a Business Education Learning System at Texas Tech University.

Specific objectives of the project, as stated in the proposal, were:

A. To identify and/or prepare the following phases of BELS:

1. Priority tasks of office workers and office administrators

    a. Courses in which tasks should be taught
    b. Programmed instructional materials and methods to teach some of the tasks
    c. Levels of competency students should achieve in these tasks

2. Positions in the Office Service Center

3. Departments in the Office Service Center

    a. Department objectives
    b. Department responsibilities
    c. Organization chart

4. Location, layout, and equipment for the Office Service Center

5. Budget for the implementation and operation of BELS

6. Financial and advisory support from educational and business organizations for future development of the system

B. To develop a procedure for preparing the following materials to be used in the Office Service Center:

1. Work input

    a. "Live" work from off and on campus
    b. Simulated work

2. Job descriptions

3. Office procedures

4. Job manuals

5. Procedure flow charts

6. Office forms

7. Office manual

In some cases, the research procedures used during the investigation period produced more than the items contracted for in the proposal. For example, even though the proposal stated that only a procedure would be developed for identifying "live" work from off and on campus, the research investigation produced not only a procedure but an actual survey which identified the specific types of "live" work which students at Texas Tech University would be willing to pay to have performed in the Office Service Center. The "live" work reported in the survey was then incorporated into the list of work to be accomplished in the OSC.

If such a survey had not been conducted, it would have been necessary for the researchers to speculate as to the types of work which might be submitted by on-campus students. Because conclusions based on research are sounder than those based on speculation, the survey, even though time- and effort-consuming, was judged to have been necessary in order to accurately identify the work to be accomplished in the OSC.

Also, descriptions for all OSC positions to be filled by students are presented in the report, even though it was agreed, in the proposal, that only a procedure by which to prepare job descriptions would be planned. Therefore, in addition to planning the procedure during the contract period, the procedure which was planned was actually implemented. (For procedural details, see page 24.) The data collected in the implemented procedure enabled the development, after analysis and refinement, of job descriptions.

A third item included in the report but not contracted for in the proposal is the sample organization chart for one particular group of special program students--disadvantaged adults (see page 66). Even though some disadvantaged adults, depending on educational and work experience background, motivation, and basic intelligence, could logically work in some of the positions included in the organization chart for degree students (see page 60), because short, concentrated educational programs are currently popular for such students, an appropriate OSC organization chart for such a program was developed. It is, therefore, included in the report.

Priority Tasks

Some overwhelming unanticipated problems, however, did arise when attempting to satisfy the following objective and subparts:

> Identify priority tasks of office workers and office administrators
>
> Courses in which tasks should be taught
>
> Levels of competency students should achieve in these tasks

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To elaborate, it was expected that data collected in interviews with office workers, after compilation, would produce a list of priority tasks. This seemed a reasonable expectation, since the Job Analysis form used as an interview guide required the interviewer to ask the office workers to report "the most important tasks performed on this job." After studying the data collected, however, this expectation was not fulfilled because the office worker's answer to this question depended on how he interpreted the words "most important" and how he, personally, defined "task." In order to report only his "most important" tasks, the worker would necessarily have had in mind a specific criterion which would enable him to eliminate the unimportant. It is obvious from the data collected that some respondents may have used, as a criterion, frequency of performance; others, length of time required to perform; others, significance to the business, etc. It is also possible, or probable, that some respondents had no criterion of importance in mind. As a result, they may have reported, under the pressure of an interview situation, every one of their tasks which they could think of easily and quickly.

In view of the implications revealed above concerning the reporting of "most important tasks," it would be unwise to regard the list compiled from those reported to be "most important" as a priority list, since virtually all work reported as "tasks" by those interviewed are included.

Another problem involved a workable definition of "task." As was implied earlier, a study of the data collected from the interviews revealed that office employees obviously had various definitions in mind when reporting their own tasks. Even interpreting the word "task" in its broadest sense, i.e., a unit of office work, some of those reported by interviewees could not have been logically reported; for example, "be aware of legal implications of Workman's Compensation." This statement, to the researchers, represents a knowledge, while, evidently, to the reporting worker, it represented a task.

Another problem recognized in compiling the task data, and still related to a "task" definition, was that concerning levels, or hierarchies, of tasks. The following examples are offered to clarify the point: Some office workers reported as a task "typewrite office forms," while others reported "typewrite invoices"; some reported "typewrite financial statements," while others reported "prepare financial statements"; some reported "open mail," while others reported "process mail." Some workers were very specific in reporting; others used less descriptive terminology. Again, it is obvious that the statements reported indicated that all employees interviewed did not have the same "task" definition in mind.

Because of the implications of the preceding five paragraphs, the list compiled from the data collected in the job analysis interviews should be regarded, not as a list of priority tasks, but as a list which incorporates all statements reported by office employees in answer to the question: "What are the most important tasks to be performed on this job?"

In an attempt to produce a list of tasks from which all statements except those identifying units of office work had been eliminated, project researchers implemented a procedure involving the use of appropriate NOBELS and Taxonomy[1] verbs. This procedure involved (a) categorizing under appropriate "managing" and "interacting" domain verbs from the Taxonomy of Office Activities the statements reported as "tasks" by interviewees occupying OSC "manager" positions[2], and (b) categorizing statements reported by interviewees occupying OSC "worker" positions[3] under appropriate verbs advocated in Development of Performance Goals for a New Office and Business Education Learnings System,[4] a product of NOBELS research. More details about this procedure of categorizing are given beginning on page 39.

Even though this tedious categorization involved large amounts of both time and effort, it is obvious that the list produced (see page 40) does include knowledges and skills, as well as various levels within the hierarchy of office work. While the categorization procedure was extremely valuable in terms of reducing the volume of reported statements from interviewed office employees to a more meaningful list, project researchers feel that this procedure did not produce the list of "pure" tasks hoped for.

At this point in the investigation, researchers decided to try to develop the desired list of "pure" tasks by applying an acceptable definition of the word "task" to the statements categorized according to NOBELS and Taxonomy verbs. Thus, the search for an acceptable definition of "task" began. The following definitions were considered; each was applied, unsuccessfully, to the list of statements reported by office employees.

1. Job task: a specific assignment with an identifiable accomplishment or end result.[5]

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[1] Harry Huffman, et al. A Taxonomy of Office Activities for Business and Office Education, Interim Report, Project No. 7-1223, Grant No. OEG-1-7-071223-5134, July, 1968.

[2] "Manager" positions include those filled by senior students enrolled in Administrative Management and graduate students.

[3] "Worker" positions include those filled by sophomore degree, non-degree, or special program students enrolled in Office Practicum.

[4] Frank Lanham, Development of Performance Goals for a New Office and Business Education Learnings System, Project No, 8-0414, Grant No. OEG-0-0-080414-3733 (083), April, 1970.

[5] Lawrence W. Erickson. Basic Components of Office Work--An Analysis of 300 Office Jobs, Monograph 123, South-Western Publishing Co., 1971, p. 2.

2. Basic task: those major performances of an office worker designated by a supervisor or an employee as the central purpose of the job.[6]

Neither of these definitions proved descriptive enough, and restrictive enough, to produce the list of "pure" tasks desired.

Therefore, project researchers developed their own definition of "task." The product of their efforts follows:

Task: a unit of office work which meets all of the following criteria:

a. is important enough to be one of the assigned duties or responsibilities of a particular office position
b. is performed by a single worker
c. results in an identifiable and significant accomplishment or end result
d. can be divided into a sequence of organized and systematized steps of performance

This definition is restrictive in nature. Points a and c relate to the concept of importance. Point c, in particular, presents a problem in judging the significance of a particular unit of office work. To apply Point c, the person making the decision must have a criterion in mind--significant in relation to what? An idea gleaned from NOBELS research is to determine significance in terms of effects on people either inside or outside the company, or in terms of failure to perform the task which will result in some financial loss to the employer.

Points b and d relate to the problem mentioned earlier about levels of office tasks, hierarchies of units of office work, and to the "hows" of performing units of work. Specifically, application of Points b and d to a reported statement from an office employee should enable the decision maker to segregate the hierarchy of the "whats" of office work--tasks, processes, systems--from the "hows" of office work--methods and procedures. (For definitions of task, process, system, method, and procedure, see Appendix A, page 93.)

After the task definition had been developed, however, there was insufficient time left during the investigation period for project researchers to apply this definition to the list of reported statements. (Because of complications involved in spending project funds, all project investigators, with the exception of one graduate student employed as a research assistant 10 hours a week during the spring semester, were contracted beginning May 31, instead of January 2, as originally planned.)

It is unknown, therefore, whether application of the developed task definition would result in an acceptable list of tasks. A rushed, superficial attempt was made, and complications did arise. It is suspected, therefore, that refinement of the definition may be necessary. Hopefully, further research on this topic can be made and consultants knowledgeable in both job analysis and tasks analysis can be brought in for advice and guidance.

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[6] Lanham, op. cit., p. 2.

Significant points related to Objective A-1 might be summarized in the following manner: In job analysis interviews, office employees occupying, in Lubbock businesses, corresponding OSC positions were asked to report their most important tasks. Reported statements were then compiled. The list was examined to determine whether it could be considered a priority task list. It was determined that this list could not be considered a satisfactory list of tasks; therefore, it could not be considered a satisfactory list of priority tasks. In an effort to eliminate all statements from the list except tasks, reported statements were categorized according to Taxonomy "managing" and "interacting" domain verbs and NOBELS verbs. This procedure reduced the list of statements to a more refined list, but failed to produce the desired list of "pure" tasks. Both Erickson's and Lanham's definitions of "task" were applied to the list of reported statements, with little success. The definitions were not descriptive enough, nor restrictive enough, to produce a satisfactory list of tasks. Project researchers then developed a restrictive definition of "task," which, hopefully, will be more useful than the definitions previously considered. After the definition of "task" had been developed, however, time remaining in the investigation period proved insufficient to permit experimenting with the definition of "task" developed by project researchers. Thus, the product of all efforts cited previously in this paragraph is a list of categorized statements reported by office workers which includes, in addition to units of office work which fit into the developed "task" definition, some knowledges, skills, responsibilities, processes, and steps within methods of performance.

Because of the insurmountable problems encountered in developing a satisfactory task list, problems arose when attempting to determine "courses in which tasks should be taught" and "levels of competency students should achieve in these tasks."

The list of statements categorized according to Taxonomy and NOBELS verbs was used to satisfy the objective "courses in which tasks should be taught." Each statement listed was considered in terms of the types of educational preparation implied in the statement. Responsibility for the educational preparation implied was then assigned to be taught in specific BELS core courses. More detail on procedure is supplied on page 39.

"Levels of competency students should achieve in these tasks" could not be achieved because satisfaction of this objective could have been made possible only through the following sequence of steps: first, identifying very specifically the tasks to be performed, and second, identifying the specific behavior necessary to perform satisfactorily each of the tasks previously identified. Thus, success criteria would have to have been developed for each of the tasks identified. Because development of the desired list of specific tasks, during the period of investigation, proved impossible, the determination of competency levels based on those tasks was not attempted.

During the analysis period, the need for, and advantages of, relating research for BELS and NOBELS became increasingly apparent and important. The ultimate goal of NOBELS is to implement a systematized curriculum which will adequately serve the needs of business. NOBELS researchers, thus far, have not identified such a system. BELS researchers (those involved in this project), believe that the BELSystem, illustrated on page 3 and described on pages 1 through 15, is such a system--a system through which the needs of business can be translated effectively into curriculum offerings.

Budget

In preparing the proposal, it was anticipated that a budget would be proposed for the implementation and operation of BELS. As the project developed, however, it became apparent, even as late as the first of July after having talked with TEA personnel, that there were many unforeseen opportunities for expanding the scope of the development and implementation of BELS.

It has not been possible, because of limitations of time, to explore the cost of many of these new opportunities because they involve complex and far-reaching implications. Some of the opportunities and problems involved in the further development and implementation include:

1. The relationship between BELS and Phase I of the nationwide research project NOBELS, which was funded for $249,361.42. In the further development of BELS, consideration will be given to utilizing even more information from the NOBELS project.

2. It was originally planned to have instructional materials prepared by the faculty and consultants. At the Austin progres report meeting for the project in June, 1971, the question was raised as to whether a group of Texas business teachers should attend an "Instructional Materials Institute" and develop instructional materials, after having received professional instruction.

There would be a considerable difference in the cost, depending on which approach is used to prepare the necessary instructional materials for the BELSystem. A decision will be made only after the topic has been thoroughly investigated.

3. Originally, it was planned to teach just tasks; but as described on page 39, this procedure became questionable. Further research needs to be done to determine whether skills, knowledges, tasks, or all three should be taught. It has not been possible within the investigation period to plan the research procedures to the extent necessary to attach a cost figure to the additional research.

4. There were not as many appropriate programmed instructional materials available as had been anticipated. It will not be possible to determine the cost of preparing these materials until further research has been conducted.

One important phase of the budget has been prepared, however--that dealing with the cost of equipment necessary to begin OSC operation. Anticipated cost of equipment is presented on page 69.

III. PLANS FOR IMPLEMENTING BELS

Work to Be Performed in the OSC

For each position represented in the OSC, a list of work to be performed was developed. The bases used for determining the specific work to be assigned to each position were:

1. Information collected in a job analysis conducted by senior Internship students

2. Types of work Texas Tech students, in a survey, indicated they would pay to have performed in the Center

3. Division of work among the OSC departments, as reflected by the statements of departmental objectives and responsibilities.

During their first class hour, senior Internship students were introduced to the BELSystem concept. In a subsequent meeting, much discussion involved the general nature of the Office Service Center. In succeeding class periods, OSC departments were agreed upon, and department objectives and responsibilities were established (see pages 61through 65). Positions within departments were also determined. An organization chart (see page 60) was then produced incorporating appropriate departments and positions.

After having each Internship student indicate several OSC positions he might be interested in investigating, the instructor assigned a specific OSC position to each student. In order to fulfill his assignment, each student interviewed from 2 to 4 office employees who held his assigned OSC position title. In other words, each student did a job analysis on several comparable positions in actual businesses.

A Job Analysis form (see page 97), developed by the class and pretested both in the classroom (by simulating an interview) and in several local businesses, served as the instrument for collection of data. Data was collected in 66 interviews conducted in 30 local business offices.

Each Internship student then synthesized the data from the several Job Analysis interview instruments onto a Job Information form (see page 101). Thus, a Job Information form that incorporated all the data collected in the several interviews with office workers was prepared for each OSC position. Included in each Job Information form were the following types of information: work typically performed on the job, general and specific educational and experience requirements, physical stamina and competencies needed, employment tests required, and a job description for the position.

Based on a consideration of the information collected from interviews about work performed in a particular position and, also, on their understanding of the OSC departmental objectives and responsibilities, students then developed a list of "live" and generated tasks for each position. "Live" tasks include that work anticipated to be performed in the OSC for money. Generated tasks include work to be performed in the OSC which originates through the normal internal operations necessary to operate the Center.

Project researchers studied the lists of tasks compiled by each student for each position. (Hereafter, these statements which students identified as tasks will be referred to as statements of work, or work statements. This is necessary since the lists include, in addition to units of office work which fit into the developed "task" definition found on page 20, some responsibilities, skills, knowledges, processes, and steps within methods of performance.) Extensive revisions were made in the wording of the students' statements to accomplish parallelism of expression, more concrete communication of ideas, etc.

Work statements for each position within a department were then considered as they related to work statements listed for other positions within the department.

Project investigators then studied, for each department, the departmental objectives and responsibilities assigned to each OSC department in relation to the list of work statements assigned to each position within the department. This reconciliation of work to be performed within a department with departmental objectives and responsibilities produced further revisions in the work statements. To elaborate, it became apparent that some of the activities necessary to accomplish some of the stated objectives of the departments were not assigned to any employee within the department. Therefore, project researchers assigned the necessary additional work statements to appropriate positions within the department.

Changes in work statements for several positions resulted when project investigators incorporated the results of a survey of students at Texas Tech University, which was conducted to determine what types of "live" work students would pay to have performed in the Center. When Internship students made up their list of "live" work, the survey was still in progress; therefore, results were not available.

After reconciling work statements within departments, project researchers attempted to reconcile work statements among departments. When this process had been completed, it was possible to refine job descriptions. Because of the revisions necessary to the work statements, and because job descriptions must necessarily reflect departmental objectives and responsibilities, as well as work to be performed at each work station, it was necessary for project researchers to revise extensively the job descriptions submitted by Internship students.

At this point, it seems wise to emphasize the fact that while students are helpful in research efforts of this nature to gather raw data, much time and effort is needed from experienced researchers to study, compile, analyze, synthesize, and interpret the data collected.

On the following pages, the work to be performed in each position is presented.

Administrative Assistant

Live tasks. None

Generated tasks

1. Compose, issue, and interpret operating policies determined by President and the Board
2. Prepare annual reports for President and the Board
3. Prepare OSC budget for review by the President
4. Administer the budget
5. Work on short-range projects assigned by the President
6. Troubleshoot for the President
7. Interpret complex, diversified written material (such as financial data) for the President
8. Interpret, in oral and written communications, policies and procedures to employees
9. Substitute for the President in his absence
10. Understand the overall operation of the OSC including:
    - a. Funds management
        - (1) Accounting system
        - (2) Budget control
        - (3) Accounting forms control
    - b. Personnel management
        - (1) Employment tests
        - (2) Employee positions
        - (3) Employee procurement
        - (4) Labor relations
    - c. Property management--Maintenance, upgrading, and expansion of office facilities, machines, equipment, and supplies
    - d. Space management
        - (1) Traffic in office working area
        - (2) Office space needs for each department
        - (3) Methods of scheduling and maintaining conference rooms
        - (4) Custodial needs
        - (5) Work flow of office routine
    - e. Data procurement
        - (1) Information used by the President, the staff, and the Business Education Department
        - (2) Objective view of the OSC's operations for the President
        - (3) Information on the methods of initiating and developing the OSC

Systems and Procedures Analyst

Live task. Consults with offices on and off campus to improve office efficiency

Generated tasks

1. Identify inefficiencies in the OSC and make recommendations for changes

2. Compose reports incorporating findings of inefficiency and recommendations for improvement
3. Make persuasive oral presentations to effect recommended changes
4. Measure the performance of routine office work in order to accomplish work simplification
5. Analyze work flow in relation to office layout
6. Investigate new office machines in relation to work to be performed in the OSC
7. Design and revise office forms and job manuals
8. Analyze existing procedures; design and write up revisions
9. Flow-chart procedures
10. Analyze filing needs in order to select or develop appropriate filing system
11. Review established areas of responsibility and authority among OSC employees in order to remove conflicts or unnecessary duplication of effort
12. Evaluate methods, systems, and procedures practiced in the OSC
13. Work with Production, Marketing, and Accounting managers to determine pricing structure for OSC services

Executive Secretary

Live tasks. None

Generated tasks

1. Process incoming mail for President, Administrative Assistant, and Systems and Procedures Analysts
2. Compose routine letters and memos for President, Administrative Assistant, and Systems and Procedures Analysts
3. Edit and type reports composed by the President, Administrative Assistant, and Systems and Procedures Analysts
4. Acts as hostess to the executive suite
5. Screens callers and visitors for President, Administrative Assistant, and Systems and Procedures Analysts, directing to other personnel those who do not warrant seeing the executive or his staff assistants
6. Schedule appointments for the executive and his staff assistants and remind them of the appointments
7. Record proceedings of meetings in shorthand and compose minutes from the notes recorded
8. Record and transcribe confidential communications for the President, Administrative Assistant, and Systems and Procedures Analysts
9. Assist President in composing speeches
10. Assist President, Administrative Assistant, and Systems and Procedures Analysts compile statistical information to be used in reports
11. Maintain top management files
12. Coordinate scheduling, preparation and use of conference facilities for executive meetings called by the President
13. Proofread
14. Maintain adequate supplies
15. Make travel arrangements for President

Manager, Production Department

Live tasks. None

Generated tasks

1. Receive customers
2. Fill out appropriate Work Order (either Communications or Reproduction)
3. Route work to Reproduction and Communications divisions
4. Establish priorities of work to be performed
5. Set standards of quality and quantity control and evaluate work based on these standards
6. Distribute completed work to customers
7. Interview prospective Department employees
8. Consult with Division supervisors about problems encountered in accomplishing Division work
9. Direct dissatisfied customers to appropriate Division supervisor
10. Keep Employee Work Record for each employee in Department
11. Evaluate Department employees
12. Prepare Production reports required for top management
13. Work with Systems and Procedures Analysts to improve quality and quantity of work performed in Production Department
14. Work with Systems and Procedures Analysts, Marketing Manager, and Accounting Manager to determine pricing structure for OSC
15. Prepare Production budget

Secretary, Production Department

Live tasks. Make telephone calls for customers (notification of meetings, sales, etc.)

Generated tasks

1. Act as receptionist and hostess for OSC customers
2. Schedule appointments for the Production Manager, Communications Supervisor, and Reproduction Supervisor
3. Process incoming Department mail and route to appropriate divisions
4. Maintain adequate supplies for work station
5. Maintain special "finished work" file
6. Maintain Department files
7. Answer routine Department correspondence
8. Send copy of Work Order form, with charges recorded, to Accounting
9. Assist Production Manager in compiling Production reports
10. Type Department budget
11. Record proceedings of Department meetings and prepare typewritten minutes
12. Direct dissatisfied customers to appropriate Division Supervisor
13. In Production Manager's absence, receive customers, fill out Work Order forms, record pertinent instructions for work to be performed, and distribute completed work to customers
14. Act as telephone receptionist for the Production Department
15. Record shorthand from dictation and transcribe Department communications
16. Distribute work to be performed to appropriate Division Supervisor

17. Deliver work to be completed to appropriate Division Supervisor
18. Edit reports composed by Production Manager, Communications Supervisor, and Reproduction Supervisor

Supervisor, Communications Division, Production Department

Live tasks. Proofread

Generated tasks

1. Schedule job assignments as they are received from Production Manager
2. Assign jobs to individual workers
3. Check quality of all completed jobs
4. Check completed job against instructions on Work Order
5. Record charges on Work Order forms when job is completed
6. Answer questions from customers concerning jobs performed in Communications Division
7. Place phone calls to customers about work to be performed, if instructions on Work Order are incomplete or unclear
8. Interview prospective Division employees sent by Personnel; make recommendations for selection
9. Assist Personnel in orienting new Communications Division employees
10. Recommend dismissal of incompetent workers to Personnel
11. Prepare Division budget
12. Inform subordinates of all policy and procedure changes
13. Counsel workers on job-related problems
14. Supervise the production of all Division work
15. Evaluate Division employees

Stenographer, Communications Division, Production Department

Live tasks

1. Take dictation from visiting customers
2. Take dictation from customers over the telephone
3. Transcribe from shorthand notes
4. Transcribe from recordings
5. Perform arithmetic calculations by machine
6. Alphabetize cards, names, etc.
7. Type fill-ins on various kinds of business forms
8. Proofread

Generated tasks

1. Take and transcribe dictation from OSC personnel
2. Transcribe from recordings dictated by OSC personnel
3. Report, to Administrative Services Secretary, machines needing repair
4. Prepare Division budget
5. Maintain adequate supplies for work station
6. Place outgoing telephone calls to customers about jobs
7. Receive incoming telephone calls from customers about jobs
8. Proofread

9. Keep a work schedule
10. Suggest revisions and/or additions to job manual
11. Type various OSC forms (purchase orders, invoices, etc.)
12. Deliver completed work to supervisor for review

Transcriber, Communications Division, Production Department

Live tasks

1. Transcribe business communcations (reports, letters, memos) from recordings
2. Proofread
3. Alphabetize cards, names, etc.
4. Type fill-ins on forms from recordings

Generated tasks

1. Keep desk stocked with letterhead, envelopes, carbon paper, copy paper, and other needed supplies
2. Maintain, for a predetermined length of time, a file of transcribed recordings
3. Place calls to customers to ask questions about jobs
4. Receive calls from customers about jobs
5. Keep a work schecule
6. Report, to Administrative Services Secretary, machines in need of repair
7. Transcribe, from recordings, OSC reports required of managers
8. Type OSC letters and memos dictated on recordings
9. Proofread
10. Type fill-ins on OSC forms

MT/ST Operator, Communications Division, Production Department

Live tasks

1. Typewrite reports
2. Typewrite letters--both business and personal
3. Typewrite form letters
4. Typewrite tests for faculty
5. Typewrite class handouts
6. Typewrite themes
7. Typewrite term papers
8. Typewrite theses
9. Typewrite dissertations
10. Typewrite manuscripts with footnotes
11. Typewrite manuscripts without footnotes
12. Typewrite statistical manuscripts
13. Typewrite technical manuscripts
14. Typewrite outlines
15. Typewrite bibliographies
16. Typewrite address labels
17. Typewrite cards

18. Typewrite envelopes
19. Typewrite legal documents
20. Typewrite minutes of meetings
21. Typewrite agendas
22. Typewrite tables
23. Typewrite bulletins
24. Typewrite news releases
25. Typewrite resumes
26. Typewrite data sheets
27. Typewrite book reports
28. Typewrite file folder labels
29. Typewrite fill-ins on business forms
30. Typewrite duplicating masters (fluid, stencil, offset)
31. Proofread

Generated tasks

1. Type, from handwritten copy or from typewritten copy with proofreaders' marks, reports required of OSC managers and staff assistants
2. Maintain adequate supplies at work station
3. Type envelopes or address labels for mailouts of OSC advertising
4. Maintain a file of completed work
5. Keep a work schedule
6. Receive calls from customers about jobs
7. Place outgoing calls to customers about jobs
8. Proofread
9. Answer questions from dissatisfied customers about completed work

Supervisor, Reproduction Division, Production Department

Live tasks. None

Generated tasks

1. Schedule job assignments as they are received from Production Manager
2. Assign work to individual Operators
3. Check Work Orders, when submitted from Production Manager, for adequacy of details
4. Check outgoing work for quality
5. Record charges on Work Order when job is completed
6. Assist Operators with problems encountered when duplicating
7. Place calls to customers for additional information
8. Receive complaints from dissatisfied customers about jobs
9. Maintain adequate supplies for work station
10. Interview prospective Division employees sent by Personnel and make recommendations for selection
11. Prepare Division budget
12. Train new Reproduction Operators
13. Recommend dismissal of incompetent workers to Personnel
14. Supervise production of Division work
15. Inform Division workers of all policy and procedure changes
16. Keep informed on new appliances and reproduction equipment

17. Assist Systems and Procedures Analysts in evaluating work methods
18. Evaluate Division employees
19. Perform arithmetic calculations by machine

Operator, Reproduction Division, Production Department

Live tasks

1. Wrap packages for mailing
2. Duplicate copies on fluid duplicator
3. Duplicate copies on stencil duplicator
4. Duplicate copies on offset duplicator
5. Prepare duplicating masters from an original on a copying machine
6. Prepare paste-up originals from which to make masters
7. Prepare masters already duplicated for storage
8. Collate and staple
9. Reproduce copies on a copying machine

Generated tasks

1. Prepare machines for operation
2. Prepare machines for disuse at end of the work day
3. Duplicate OSC forms, reports, advertisements, business communications on fluid duplicator, stencil duplicator, offset duplicator, or copying machine
4. Collate and staple
5. Clean machines as needed
6. Notify Division Supervisor of supplies needed
7. Keep informed on new appliances and reproduction equipment
8. Maintain file for used duplicating masters
9. Report repair work needed on Division equipment to Administrative Services Secretary
10. Prepare paste-up originals from which to make masters on a copying machine
11. Keep a work schedule

Manager, Accounting Department

Live tasks

1. Prepare financial statements
2. Prepare payroll
3. Audit books for owners of small businesses

Generated tasks

1. Dictate Department correspondence and reports
2. Maintain security over financial records
3. Maintain cost accounting system
4. Keep informed on office machines useful to handling of financial data
5. Balance accounts receivable and accounts payable ledgers

6. Prepare financial statements
7. Balance cash receipts journal
8. Prepare payroll for OSC
9. Prepare, for the President, credits and collections reports
10. Interview applicants sent from Personnel for OSC Accounting positions
11. Sign checks
12. Evaluate Accounting Secretary
13. Prepare Accounting budget
14. Maintain adequate supplies at work station
15. Work with Systems and Procedures Analysts, Production Manager, and Marketing Manager to determine pricing structure for the OSC
16. Work with Systems and Procedures Analysts to improve accounting systems and procedures
17. Approve or reject credit applications
18. Supervise work performed by the Accounting Secretary
19. Inform Accounting Secretary of policy and procedure changes
20. Furnish information to customers inquiring about prices of work to be performed in the OSC
21. Prepare income tax returns and other special government reports
22. Perform arithmetic calculations by machine

Secretary, Accounting Department

Live tasks

1. Post debit and credit entries
2. Reconcile bank statements
3. Type financial statements

Generated tasks

1. Schedule appointments for employer and remind him of appointments
2. Screen employer's calls
3. Conduct credit investigation on applicants
4. Assist customers in filling out credit applications
5. Prepare statements for billing
6. Type payroll checks
7. Receive payments from customers
8. Type Department budget
9. Transcribe recorded Accounting communications
10. Assist in preparing income tax forms
11. Maintain Accounting files
12. Process incoming mail
13. Record, in shorthand, Manager's dictation and transcribe
14. Type financial statements
15. Reconcile bank statements
16. Post debit and credit entries to customers' accounts
17. Post accounts from journal entries to the ledger
18. Type Accounting reports required for top management
19. Edit Accounting reports prepared by Accounting Manager
20. Perform arithmetic calculations by machine

Manager, Marketing Department

Live tasks. None

Generated tasks

1. Conduct marketing research for the OSC
2. Evaluate marketing surveys and report implications to top management
3. Dictate reports, letters, memos, bulletins, publicity releases
4. Select advertising media
5. Compose advertising for newspaper, radio, TV, house organs, bulletin boards
6. Solicit business from prospective customers
7. Visit, to maintain good public relations, established OSC customers
8. Negotiate contracts with OSC customers.
9. Receive customers who are bringing in work for the first time; explain OSC operation
10. Prepare Marketing reports for top management
11. Supervise Marketing Secretary
12. Interview prospective Department employees
13. Make speeches to acquaint potential customers with OSC services
14. Work with Production Manager, Accounting Manager, and Systems and Procedures Analysts to determine pricing structure for OSC services
15. Inform Marketing Secretary of changes in policies or procedures
16. Maintain adequate supplies for work station
17. Prepare Marketing budget
18. Evaluate Marketing Secretary
19. Perform arithmetic calculations by machine

Secretary, Marketing Department

Live tasks

1. Conduct phone surveys for customers
2. Compose publicity releases

Generated tasks

1. Assist Marketing Manager in preparing advertisements for newspaper, radio, TV, house organs, bulletin boards
2. Type contracts for OSC
3. Maintain Marketing files
4. Type Marketing budget
5. Process incoming Department mail
6. Screen Manager's calls
7. Record shorthand and transcribe dictation of Marketing Department correspondence and reports
8. Transcribe from recordings dictated by Marketing Manager
9. Compose routine letters

10. Schedule speaking engagements to groups to describe OSC services
11. Schedule appointments for Marketing Manager
12. Maintain mailing list of current customers, and of potential customers to whom advertising should be sent
13. Answer inquiries concerning OSC services
14. Edit Marketing reports prepared by Marketing Manager for top management
15. Perform arithmetic calculations by machine

Manager, Administrative Services Department

Live task. Consult with on- and off-campus offices concerning efficient procedures and systems used in OSC

Generated tasks

1. Inform employees of company insurance and retirement details
2. Supervise building maintenance including lighting, heating, cooling, etc.
3. Maintain satisfactory telephone service throughout the OSC
4. Dictate letters, memos, and reports to Secretary
5. Establish and maintain refreshment center for employees
6. Maintain security for OSC assets
7. Promote office safety
8. Coordinate the operations of the Personnel and Instructional Materials divisions
9. Prepare Department budget
10. Prepare Department reports for top management
11. Purchase, maintain, and control inventory of the centralized supply room
12. Coordinate purchasing function of OSC
13. Assist Personnel and Instructional Materials supervisors with Division problems
14. Inform subordinates of changes in policies and procedures
15. Work with Systems and Procedures Analysts to improve efficiency of Administrative Services Department
16. Be aware of legal implications of Workmen's Compensation
17. Evaluate Department employees
18. Interview applicants for Administrative Services Secretary
19. Operate a Placement Service Center to assist students leaving the BELSystem to find full-time paid employment in jobs representing their career objectives.

Secretary, Administrative Services Department

Live tasks. None

Generated tasks

1. Maintain good public relations with suppliers of services or goods for the OSC
2. Answer routine letters of inquiry
3. Edit and type Department correspondence and reports

4. Compose and type routine Department correspondence
5. Place, receive, and transfer telephone calls
6. Keep inventory of supplies
7. Maintain Department files
8. Screen calls for Administrative Services Manager, Personnel Assistant Manager, and Instructional Materials Assistant Manager
9. Arrange for repairs to machines reported by OSC departments
10. Answer, from employees, customers, or suppliers, inquiries pertinent to services performed by Administrative Services Department
11. Receive visitors who have appointments with Administrative Services Manager, Personnel Assistant Manager, and Instructional Materials Assistant Manager
12. Type Department budget
13. Maintain adequate supplies for work station
14. Schedule appointments for Administrative Services Manager, Personnel Assistant Manager, and Instructional Materials Assistant Manager
15. Prepare purchase requisitions for supplies, equipment, etc., requested by OSC personnel
16. Process Department's incoming mail
17. Refer students leaving the BELSystem to prospective employers who offer full-time paid employment in jobs representing their career objectives
18. Maintain special "Prospective Employers" file

Assistant Manager, Personnel Division, Administrative Services Department

Live task. Consult with area businessmen on Personnel problems

Generated tasks

1. Test students for placement in OSC
2. Interview students for OSC position
3. Place students in OSC positions
4. Issue orientation materials to new employees
5. Compose Division reports
6. Prepare Division budget
7. Dictate Division correspondence
8. Process employee grievances
9. Consult with other managers on personnel problems in OSC
10. Issue and file Personnel forms such as tardy forms, leaves of absence, performance analysis forms, etc.
11. Consult with appropriate managers about employees' performance evaluations to determine promotions and merit raises
12. Coordinate rotations and transfers among OSC positions
13. Evaluates suggestions from OSC employees collected in suggestion boxes
14. Work with managers to design educational experiences to develop employees who are performing unsatisfactorily
15. Conduct training programs for OSC employees
16. Act as liaison between management and labor

17. Conduct attitude surveys
18. Evaluate Personnel Stenographers
19. Interview applicants for Personnel Stenographer
20. Inform Personnel Stenographer of changes in policies or procedures

Stenographer, Personnel Division, Administrative Services Department

Live tasks. None

Generated tasks

1. Type Division correspondence and reports from shorthand, typewritten rough draft, and machine recordings
2. Type information on personnel cards, forms, and records from employment files
3. Post information to Personnel records
4. Maintain Personnel files
5. Maintain adequate supplies for work station
6. Type Division budget
7. Give routine information form files to inquiring prospective employers of previous OSC employees
8. Process incoming mail for Division
9. Telephone references listed by prospective employees on application forms
10. Performs arithmetic calculations by machine

Assistant Manager, Instructional Materials Division, Administrative Services Department

Live tasks

1. Consult with businessmen and educators concerning needed instructional materials
2. Prepare office- and education-related instructional materials for sale to students, faculty, and businessmen

Generated tasks

1. Consult with OSC managers concerning needed instructional materials
2. Review instructional materials commercially available and select for purchase
3. Select audiovisual equipment for purchase
4. Keep audiovisual equipment in good working order
5. Classify instructional materials
6. Inform OSC managers of the availability of new instructional materials
7. Conduct, for department managers, previews of new instructional materials
8. Prepare instructional materials for OSC use requested by OSC managers
9. Work with Systems and Procedures Analysts and Administrative Services Manager to review and revise office manual

10. Dictate Division correspondence to Stenographer
11. Supervise Division Stenographer
12. Supervise storage of instructional materials and equipment
13. Prepare Division budget
14. Prepare Division reports required by Administrative Services Manager
15. Evaluate Instructional Materials Stenographer
16. Interview applicants for Instructional Materials Stenographer
17. Inform Instructional Materials Stenographer of policy and procedures changes

Stenographer, Instructional Materials Division, Administrative Service Department

Live task. Make transparencies

Generated tasks

1. Receive requests for instructional materials
2. Schedule the use of instructional materials and audiovisual equipment
3. Check out instructional materials to requesting OSC department
4. Maintain library of instructional materials
5. Maintain inventory of instructional materials and audiovisual equipment
6. Recommend purchase of instructional materials to Administrative Services Secretary
7. Check packing slips and instructional materials when new ones arrive
8. Maintain file of overdue instructional materials
9. Write letters requesting information about new instructional materials
10. Repair instructional materials
11. Report repairs needed on equipment to Administrative Services Secretary
12. Notify OSC managers of preview of new instructional materials
13. Process incoming Division mail
14. Record, in shorthand, Assistant Manager's dictation of Division correspondence and transcribe it
15. Type Division budget
16. Type Division reports required by Administrative Service Manager
17. Assist in preparing instructional materials, as needed by the OSC and by instructors of BELS courses

Distribution, to BELS Core Courses, of Prerequisite Office Education Learnings Implied in Statements of Work to Be Performed

A careful study of the list of work statements led project researchers to conclude that the list did not actually reveal educational implications for teaching, or competencies necessary to perform the tasks. At the same time, it was recognized that the tedious, detailed procedures of formal task analysis were impossible to accomplish within the length of time for this research project.

The difficulty of doing job analyses and subsequent task analyses for office positions that involve some abstract activities such as computing and planning is obvious. Because most office positions are usually not as routine as many factory jobs, they are more difficult to study. While the OSC is an actual business, it is also a laboratory of human workers--a laboratory that will provide an ideal environment in which to study office positions, including job and task analyses.

This process of categorization accomplished a sizable reduction in number of work statements--from 392 to 236. The reduction resulted primarily because of commonality of duties typical to the several positions with the same title. These positions include: reproduction operator, stenographer, supervisor, assistant manager, systems and procedures analyst, and secretary. To illustrate, there are four departmental secretaries in the OSC. Realistically, persons occupying the positions of "secretary," even though working in different departments, should perform similar types of work. Comparison of the task lists for the four secretaries reveal that this is true.

Table 1 (see pages 40 through 53) shows that task statements were classified under 73 verbs. Of those 73, 11 were neither NOBELS nor Taxonomy verbs. These include administer, act, alphabetize, coordinate, dictate, make, prepare, process, promote, purchase, and troubleshoot. Since these verbs were used in the list of work statements, however, they were included.

While studying the categorized list, researchers concluded that it is impossible, and unnecessary, to teach every task as a task in the BELS courses prior to application in the OSC. To teach a task as a task in a classroom setting, the approach to learning would necessarily have to be task simulation. The list of work statements includes a large number of tasks performed in the OSC which are not complicated enough, in terms of learning, to justify a task simulation approach. In such cases, it is assumed that the general knowledges and skills learned in the classes prior to OSC experience, through transfer of learning processes, will enable the student to perform the simple task on the OSC job. However, the OSC experience will provide a quality checkpoint to determine whether the required amount of transfer of learning has taken place. If the assumed transfer of learning fails to materialize, the student will be

TABLE 1

DISTRIBUTION, TO BELS CORE COURSES, OF PREREQUISITE OFFICE EDUCATION LEARNINGS IMPLIED IN STATEMENTS OF WORK TO BE PERFORMED

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
ACT*							
as hostess to the executive suite	x	x					
as telephone receptionist to Production Department	x	x	x		x	x	
as liaison between management and labor			x		x	x	
as hostess and receptionist to OSC customers	x	x					
ADMINISTER*							
the OSC budget					x	x	
ALPHABETIZE*							
cards, names	x						
ANALYZE							
existing procedures				x			
filing needs			x				
work flow in relation to office layout					x		

*An asterisk indicates that the verb was not listed in either the Taxonomy or Development of Performance Goals for a New Office and Business Education Learning System.

[1] OPd--Office Production
[2] OPc--Office Practicum
[3] OM--Office Management
[4] COC--Control of Office Cost
[5] AM--Administrative Management
[6] O--Other
[7] EI--Educationally Insignificant

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
ANSWER							
inquiries about OSC services		x					
inquiries from employees		x					
routine department correspondence						x	
routine questions from customers		x					
routine questions from dissatisfied customers about completed work		x					
APPROVE							
credit applications					x		
ARRANGE							
for repairs of machines		x					
ASSIGN							
jobs to individual workers					x		
ASSIST							
customers in filling out credit applications						x	
in preparing income tax forms						x	
in preparing OSC advertisements						x	
in preparing OSC instructional materials						x	
president in composing speeches						x	
production manager in compiling production reports		x					
personnel manager in orienting new employees					x	x	
subordinates in performance of their work					x	x	
systems and procedures analysts in evaluating work methods				x			
AUDIT							
books for owner of small business							x
BALANCE							
accounts receivable and accounts payable ledgers							x
cash receipts journal							x

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
CHECK							
completed job against instructions on work order							x
packing slips and instructional materials when new ones arrive		x					
quality of all completed jobs		x			x		
work orders for adequacy of details							x
CHECK OUT							
instructional materials to OSC departments							x
CLASSIFY							
instructional materials					x		
CLEAN							
machines as needed		x					
COLLATE							
and staple		x					
COMPOSE							
advertising for OSC						x	
minutes from proceedings of meetings recorded in shorthand		x					
operating policies determined by the president and the board					x	x	
publicity releases						x	
reports incorporating findings of inefficiency and recommendations for improvement					x	x	
routine letters and memos						x	
CONDUCT							
attitude surveys					x		
credit investigations on applicants		x					
marketing research for the OSC						x	
phone surveys for customers		x					
previews of new instructional materials						x	
training programs for OSC employees					x	x	

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
CONSULT							
with division supervisors about problems encountered in accomplishing division work					x	x	
with other managers and personnel about problems in the OSC					x	x	
with appropriate management about employees performance to determine promotions and merit raises					x	x	
with others concerning needed instructional materials					x	x	
COORDINATE*							
operations of subordinate divisions					x		
purchasing functions of the OSC					x		
rotations and transfers among OSC positions					x		
scheduling, preparation, and use of conference facilities							
COUNSEL							
workers on job-related problems	x	x				x	
DELIVER							
completed work to supervisors for review							x
work to be completed to appropriate division supervisor							x
DESIGN							
office forms				x			
DICTATE*							
department correspondence and reports to a secretary or stenographer					x	x	
department correspondence and reports into a machine					x	x	
DIRECT							
dissatisfied customers to appropriate division supervisor							x

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
DISTRIBUTE							
completed work to customers							x
work to be performed to appropriate supervisors							x
DUPLICATE							
copies on fluid duplicator		x					
copies on stencil duplicator		x					
copies on offset duplicator		x					
OSC forms, reports, advertisements, business communications		x					
EDIT							
correspondence composed by boss		x				x	
reports composed by boss		x				x	
ESTABLISH							
and maintain refreshment center for employees					x		
priorities of work to be performed		x			x		
EVALUATE							
market surveys and report implications to top management					x		
methods, systems, and procedures practiced in the OSC				x			
subordinate employees			x		x		
suggestions deposited by employees in suggestion box			x			x	
work completed by employees		x	x	x			
FILL OUT							
work orders							x
FLOW-CHART							
procedures				x			
FURNISH							
information to inquiring customers about OSC prices							x

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
GIVE routine information from Personnel files to inquiring prospective employees		x					
IDENTIFY inefficiencies in the OSC and recommend changes				x	x		
INFORM employees of company insurance and retirement details							x
OSC managers of availability of new instructional materials							x
subordinates of policy and procedure changes							x
INTERPRET complex, diversified written material for the president						x	
policies and procedures to employees in oral or written communications						x	
INTERVIEW students for OSC positions		x			x		
INVESTIGATE new office machines in relation to work to be performed in the OSC			x		x		
ISSUE orientation materials to new employees							x
personnel forms such as leaves of absence and performance analysis forms							x
KEEP a work schedule		x					
audiovisual equipment in good working order						x	
employee work record for each department or division employee		x					
informed on new appliances and reproduction equipment	x	x	x				
inventory of supplies			x	x			

TABLE 1--Continued

Statement of Work to be Performed	OPd^1	OPc^2	OM^3	COC^4	AM^5	O^6	EI^7
MAINTAIN							
adequate supplies for work stations							x
cost accounting system						x	
department or division files	x	x					
file of completed work for customers		x					
file of transcribed recordings		x					
file for used duplicating masters		x					
file of overdue instructional materials		x					
good public relations with suppliers of goods or services to the OSC						x	
inventory of instructional materials and audiovisual equipment		x					
library of instructional materials		x					
mailing lists of customers and of potential customers		x					
satisfactory telephone service throughout the OSC		x					
security for OSC assets			x				
security over financial records			x				
special "Prospective Employers" file		x					
top management files		x					
MAKE*							
persuasive oral presentations to effect recommended changes					x	x	
speeches to acquaint potential customers with OSC services						x	
transparencies		x					
travel arrangements for boss	x	x					
MEASURE							
the performance of routine office work in order to accomplish work simplification				x			
NEGOTIATE							
contracts with OSC customers					x	x	

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
NOTIFY							
OSC managers of preview of new instructional materials							x
supervisor of supplies needed							x
OPERATE							
a Placement Service in the Personnel Division to help students leaving the BELSystem to find full-time paid employment in jobs representing their career objectives					x		
PERFORM							
arithmetic calculations by machine	x						
PLACE							
phone calls to customers for additional information about work to be performed	x	x					
phone calls to references listed on application form of prospective OSC employee		x x					
students in OSC positions					x	x	
POST							
accounts from journal into the ledger						x	
information to Personnel records		x					
PREPARE*							
annual reports for president and board					x	x	
credit and collection reports					x	x	
department or division reports					x	x	
department or division budgets				x	x	x	
duplicating masters from an original on a copying machine		x					
financial statements						x	
income tax returns and other special government reports					x	x	
instructional materials requested for OSC use by managers					x	x	

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
machines in Reproduction Division for operation		x					
machines in Reproduction Division for disuse at end of work day		x					
office- and education-related instructional materials for sale to students, faculty, and businessmen					x	x	
OSC budget for review by the president				x	x	x	
paste-up originals from which to make masters		x					
payroll	x					x	
purchase requisitions to order goods and services for the OSC						x	
statements for billing		x					
used masters for storage		x					
PROCESS*							
employee grievances			x		x		
incoming departmental mail and route to appropriate employees		x					
PROMOTE*							
office safety					x	x	
PROOFREAD	x	x				x	
PURCHASE*							
supplies for centralized supply room		x			x		
RECEIVE							
complaints from dissatisfied customers about jobs		x					
customers	x	x					
payments from customers for services performed by OSC personnel		x					
requests for instructional material		x					
telephone calls from customers about jobs		x					
visitors	x	x					

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
RECOMMEND							
dismissal of incompetent workers to Personnel							x
purchase of instructional materials to Administrative Services manager							x
RECONCILE							
bank statements						x	
RECORD							
changes on Work Order form when job is completed		x				x	
proceedings of meetings in shorthand						x	
shorthand from dictation given by visiting customers						x	
shorthand from dictation given over the telephone by customers						x	
shorthand from boss's dictation							
REFER							
students leaving the BELSystem to prospective employers who offer full-time employment in jobs representing their career objectives		x					
REPAIR							
instructional materials						x	
REPORT							
machines needing repair to Administrative Services secretary		x					
REPRODUCE							
copies on a copying machine		x					
REVIEW							
established areas of responsibility and authority among OSC employees in order to remove conflicts or unnecessary duplication of effort			x	x	x		

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
instructional materials commercially available and select for purchase						x	
ROUTE							
work to appropriate department or division		x					
SCHEDULE							
appointments for boss and remind him of them		x					
job assignments as customers submit work to be performed		x					
speaking engagements for Marketing manager to make to groups to describe OSC services		x					
use of instructional materials and audiovisual equipment		x					
SCREEN							
callers and visitors		x					
SELECT							
advertising media					x	x	
audiovisual equipment and instructional materials for purchase					x	x	
SEND							
copy of Work Order form, with charges recorded, to Accounting		x					
SET							
standards for quality and quantity of work			x	x	x		
SIGN							
checks							x
SOLICIT							
business for OSC from prospective customers						x	
SUBSTITUTE							
for the president in his absence					x		

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
SUGGEST							
revisions and/or additions to job manual, office manual			x	x	x		
SUPERVISE							
building maintenance, including lighting, heating, cooling, etc.			x		x		
production of all department or division work					x		
storage of instructional materials and equipment			x		x		
TEST							
students for placement in the OSC					x	x	
TRAIN							
new reproduction operators		x				x	
TRANSCRIBE							
correspondence and reports		x				x	
from shorthand notes		x				x	
from recordings		x				x	
TROUBLESHOOT*							
for the president					x		
TYPEWRITE							
address labels		x				x	
agendas		x				x	
bibliographies	x	x				x	
book reports		x				x	
bulletins		x				x	
cards		x				x	
class handouts		x				x	
contracts		x				x	
data sheets		x				x	
department or division budgets		x				x	

TABLE 1--Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
dissertations		x				x	
duplicating masters (fluid, stencil, offset)	x	x				x	
envelopes		x				x	
file folder labels		x				x	
fill-ins on various business forms (purchase requisition, invoice, etc.)		x				x	
financial statements	x	x				x	
form letters		x				x	
legal documents	x	x				x	
letters		x				x	
manuscripts with footnotes	x	x				x	
manuscripts without footnotes		x				x	
minutes of meetings		x				x	
news releases		x				x	
outlines		x				x	
payroll checks		x				x	
reports		x				x	
resume	x	x				x	
statistical manuscripts	x	x				x	
tables	x	x				x	
technical manuscripts	x	x				x	
term papers		x				x	
tests		x				x	
themes		x				x	
theses		x				x	
UNDERSTAND							
overall operation of the OSC		x			x		
legal implications of workmen's compensation						x	

TABLE 1—Continued

Statement of Work to be Performed	OPd[1]	OPc[2]	OM[3]	COC[4]	AM[5]	O[6]	EI[7]
VISIT							
established OSC customers to maintain good public relations					x	x	
WORK							
on short-range projects for the president					x		
with systems and procedures analysts to improve the quality and quantity of work performed in various departments and divisions			x	x	x		
with other OSC managers to determine pricing structure of the OSC				x	x		
with other OSC managers to design educational experiences to develop employees who are performing unsatisfactorily					x	x	
with OSC workers and managers to review and revise OSC-related instructional materials					x	x	
WRAP							
packages for mailing		x					

taught by supervisors, managers, or Personnel Division employees involved in training, to perform the task on the job in the OSC.

On the other hand, it is recognized that there are some tasks complicated enough or specialized enough to teach through the task simulation approach in classroom experiences prior to OSC experience; for example, typewriting a manuscript with footnotes. It is unreasonable to assume that students can go into the OSC and perform this task equipped only with a basic keystroking skill and some knowledges about appropriate style, headings, margins, etc. It is necessary that the student have the keystroking skill and the knowledges; but in order to be a productive manuscript typist, the student must have opportunity to integrate these knowledges and skills before refinement results.

The same analogy can be applied to the task of producing a mailable letter from recorded shorthand notes. Even though the student may be very adept in reading his own shorthand notes, may be a skilled typist, and may be an A+ student in grammar, he still needs some "integrating" practice before he becomes a productive transcriber.

To produce Table 1, researchers considered each work statement in terms of the type of educational preparation implied in the statement. The distribution shows the course in which the primary responsibility for learning will take place. This list is tentative. When the OSC is in operation, it will be more apparent where some of the learnings should be taught. Also, it is anticipated that additions, deletions, and revisions will be made to the list.

Identification of Task-Oriented Programmed Instructional Materials Applicable to BELS Core Courses

Before the search for task-oriented programmed instructional materials applicable to BELS core courses could begin, project researchers first had to become familiar with the common characteristics of programmed instructional materials. Programmed instruction is not limited to any particular medium of presentation. Programs may be presented on paper for reading, such as in the form of programmed textbooks (where the subject matter to be learned has been arranged in a series of sequential steps or frames), on tapes and records for listening, or on films and slides for viewing.

As explained by three authorities in the field:

> All programed materials have certain features in common. First, they require the student to focus his attention on a limited amount of material at one time. Second, they require him to respond (or answer) in some way to each segment of material. Third, they give him immediate knowledge of

> results after every response. These three features, in sequence, constitute what is here called the learning cycle. The learning cycle is repeated many times in a program. Fourth, programs permit each student to work at his own pace.[1]

In seeking to identify for this report programmed instructional materials for possible use in BELS, the term was applied in both its broad and narrow definitions. While software in the form of programmed textbooks was identified in those subject matter areas appropriate to BELS, other instructional materials were identified which fall into the category of "automated instruction." This term has been defined to include:

> . . . instructional methods considered generally to comprehend any means, devices or material, whereby teacher or tutor functions (actual or desirable) are replaced, or provided, by a wholly or partially automated sequence of instructional segments that is prepared in advance and is capable of instructing effectively when presented without direct intervention or modification by a teacher.[2]

More specifically, instructional materials were sought which were prepared for audiovisual media for individual or group use. In the process, hardware produced to be used primarily with particular software and audiovisual devices adaptable for multi-media programmed instruction were also identified.

The following procedure was used in an attempt to compile an up-to-date listing of software and hardware available in the area of programmed instructional materials.

A search in the professional library of the Educational Service Center in Lubbock revealed a most recent acquisition of the 1971 Educator's Purchasing Master.[3] This publication is divided into two volumes: Volume I--Instructional Materials, and Volume II--Instructional Equipment. Firms listed in Volume I from whom software materials could be obtained are coded according to the nature of materials they have available. A list of complete addresses was made of those organizations which handled 2 x 2 slides; recordings, audio tapes, cassette cartridges, open reel; multi-media kits; self-instructional materials; and educational games in the following areas: business behavior, business communications, business English, dictation, filing, interviewing, management, office management, office practice, secretarial practice, shorthand, and typewriting. From information obtained from Volume II, a list was also made of complete mailing addresses of those firms which could supply the following hardware: multimedia study carrels; programmers, multiple screen or multiple devices: rear screen projectors; tape recorders, programming cassettes; tape records with slide/filmstrip synchronizers and teaching machines.

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[1] Paul I. Jackobs, Milton H. Maier, and Lawrence M. Strolorow. A Guide to Evaluating Self-Instructional Programs, New York, Holt, Rinehart and Winston, Inc., 1966, p. 1.

[2] John P. DeCecco. Educational Technology, New York, Holt, Rinehart and Winston, 1964, pp. 2-3.

[3] 1971 Educator's Purchasing Master, Third Edition, Englewood, Colorado, Fisher Publishing Company, 1971.

A letter was then sent to each of the organizations on both lists asking what each firm had available in the way of hardware designed for use with either software also distributed by their company and/or software distributed by other firms. Inquiry was also made regarding software available in the area of business and office occupations, including descriptions as to the nature of the materials; e.g., content format, date last revised, average program time, and prices.

Correspondence and enclosed literature received from companies to whom letters were sent were organized under the headings "software only," "software with accompanying hardware," and "hardware only." Using the detailed listing of tasks to be performed in BELS as a basis, the following general areas of competencies were discerned: accounting, business law, communications (oral and written), English, filing, management, office machines, mathematics, shorthand, and typewriting. An annotated bibliography was then prepared listing the nature of both software and/or hardware available for multi-media programmed instruction in the above areas of business and office education. This 34-page compilation, entitled Programmed Instructional Materials Available for Possible Use in a Business Education Learning System, is available from the Business Education Department at Texas Tech University. This source information will be used as a basis for selecting instructional materials for preview and eventual purchase.

It is evident from the list of programmed instructional materials available that programs on the market at this time have been prepared to teach general competencies in designated areas. If it is desired that specific task instruction be a part of BELS, this would necessitate the preparation of a considerable amount of programmed instructional materials. However, correspondence from firms serving this educational area reveals that consultants are available to assist in the preparation of programmed materials for specific curricula.

From the list of programmed instructional materials compiled as a result of the research procedure cited previously, only the following have titles and/or descriptions which suggest they may be task-oriented:

1. CUTTING OFFICE COSTS THROUGH WORK SIMPLIFICATION. (Printed).

   Trains how to set up measurements and controls for long-range cost-cutting programs.

Available: Metromedia Analearn

Price: $12.00

2. HOW TO DELEGATE EFFECTIVELY. (Printed).

For college and adult levels. Provides on-the-job "know-how" to more effectively assign jobs and receives feedback in order to evaluate a subordinate's performance. Teacher's manual and post-program test available. 4-hr. program. 218 pp. 1968.

Available: Argyle Analearn Associates

Price: $10.00

3. HOW TO MOTIVATE EMPLOYEES. (Printed).

For college and adult levels. Develops key skills necessary to implement on-the-job motivational procedures that will increase morale and productivity of employees. Teacher's manual available. 4-hr. program.

Available: Argyle Analearn Associates

Price: $10.00

4. HOW TO SET OBJECTIVES. (Printed).

Teaching basic skills essential for identifying and defining measurable objectives. A practical, job-oriented program which defines the critical type of objectives; demonstrates how they should be set and evaluated.

Available: Metromedia Analearn, 56-05 47th Street, Maspeth,
NY 11378

Price: $10.00

5. HOW TO USE A BUSINESS TELEPHONE. (Printed).

Provides the necessary skills to be more effective on the business telephone. The authorized telephone procedure is learned on a step-by-step basis and real-life telephone behavior is simulated. Teacher's manual available. 2-hr. program.

Available:	Metromedia Analearn	Price:	$8.00
	Argyle Analearn Associates		4.75

6. INTRODUCTION TO BASIC SUPERVISION OF PEOPLE. (Printed). Burby.

For college and adult levels. Gives the supervisor the basic principles he must practice when directing people. Pretest and posttest available. 175 pp. 1966.

Available: Addison-Wesley Publishing Co., San Hill Road,
Menlo Park, CA 94025

Price: $4.95

7. MANAGING HUMAN RELATIONS. (Printed).

For college and adult levels. Imports those vital skills required for generating good and effective relations with individuals on all levels. Teacher's manual available. 5-hr. program.

Available: Argyle Analearn Associates, 235 Park Avenue South,
New York, NY 10003

Price: $10.00

8. METHODS IMPROVEMENT AND WORK CONTROLS. (Printed).

Covers work elements, flow charts, layouts, process and man-machine analysis and continuous work flow.

Available: Metromedia Analearn

Price: $12.00

9. SECRETARIAL SKILLS SERIES. (Printed). 1966.

CENTERING AND TABULATING PRACTICES FOR TYPISTS

Student learns to properly position paper in the machine and to center material, both vertically and horizontally, on standard and odd-size paper. Includes methods for centering columns of tabulated material. Tests available. 100 frames. 2-hr. program. 64 pp.

MANUSCRIPT FOR TYPISTS

Teaches the proper form for bound and unbound manuscripts. Includes page arrangement, margins, page numbering, and placement of title, subtitles, by-lines, balance lines, and footnotes. It also includes the use of the backing sheet and rules for dividing words at the end of a line. Tests available. 150 frames. 2-hr. program. 68 pp.

PRACTICES IN TYPING THE BUSINESS LETTER

Teaches placement of the standard parts of the block and modified block style business letter, line length to be used on pica and elite machines, and the form to be used for indention and spacing within the body of the letter. Presents proper form and placement of addresses on envelopes, Tests available. 150 frames. 2-hr. program. 68 pp.

PREPARING STENCILS AND MASTERS

Presents rules for proper preparation and correction of mimeograph stencils, fluid duplication and multilith masters. It also teaches the uses of styli, the scope, and lettering guides. Student also learns to diagnose common problems in producing good mimeograph copy. Tests available. 158 frames. 2-hr. program. 68 pp.

PROOFREADING THE TYPED MANUSCRIPT

Student gains a knowledge of common editing symbols and learns to use these symbols to correct rough drafts. Rules for correct spacing following punctuation marks, and the use of underlines or quotation marks with titles are presented. Student is prepared to perform the proofreading operation. Tests available.

Available: Van Nostrand-Reinhold, 399 Adrian Road,
Millbrae, CA 94030

Price: $2.25 ea.

Departments and Positions in the OSC

The Business Education Learning System is designed to offer an educational environment which ultimately provides each degree and non-degree student with the competencies needed to perform well in the business world in the position he selects as a career objective. While performing in the OSC to satisfy Office Practicum and/or Administrative Management course requirements, the student will have opportunity to integrate and apply previously learned skills, knowledges, and attitudes in a business setting which necessitates successful interaction among the personnel occupying the various positions in the Center.

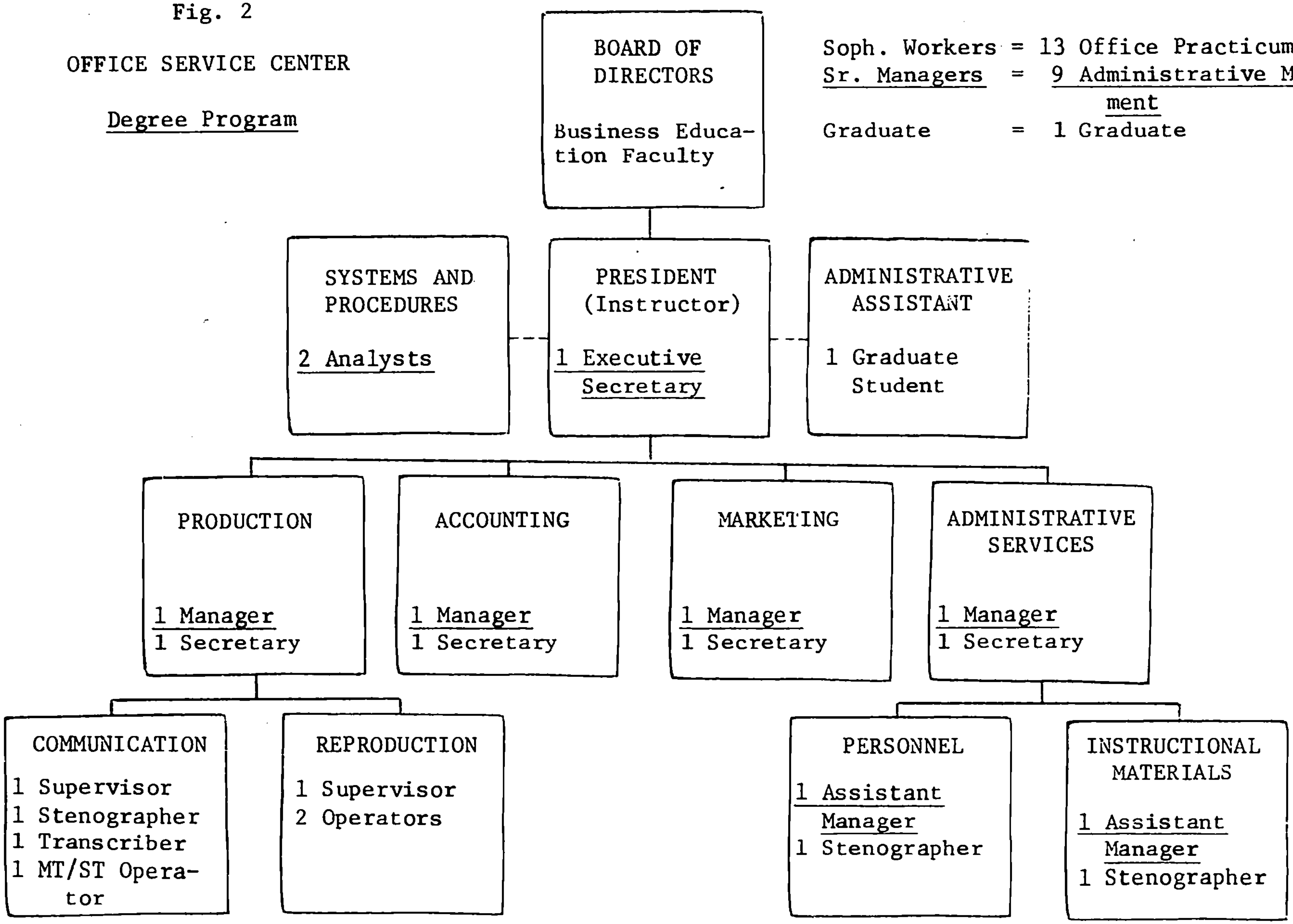
Degree Students

The number and types of positions, as well as departments within the company, can be changed to accommodate the educational aspirations, as well as the career objectives, represented among OSC personnel. The organization chart on page 60 can accommodate, simultaneously, one graduate student, nine senior degree students enrolled in Administrative Management, and 13 student workers enrolled in Office Practicum (either

Fig. 2

OFFICE SERVICE CENTER

Degree Program


BOARD OF DIRECTORS
Business Education Faculty
SYSTEMS AND PROCEDURES
2 Analysts
PRESIDENT (Instructor)
1 Executive Secretary
ADMINISTRATIVE ASSISTANT
1 Graduate Student
PRODUCTION
1 Manager
1 Secretary
ACCOUNTING
1 Manager
1 Secretary
MARKETING
1 Manager
1 Secretary
ADMINISTRATIVE SERVICES
1 Manager
1 Secretary
COMMUNICATION
1 Supervisor
1 Stenographer
1 Transcriber
1 MT/ST Operator
REPRODUCTION
1 Supervisor
2 Operators
PERSONNEL
1 Assistant Manager
1 Stenographer
INSTRUCTIONAL MATERIALS
1 Assistant Manager
1 Stenographer

Soph. Workers = 13 Office Practicum
Sr. Managers = 9 Administrative Management
Graduate = 1 Graduate

sophomore students pursuing a four-year degree, sophomore students who do not have a college degree objective, special program students, such as mentally handicapped students, or a combination of the three.

Students working in this type of organizational structure--one which incorporates a hierarchy of office positions, realize that each higher level position requires higher level abilities--abilities acquired from the planned learning experiences included in the BELSystem. The organization chart on page 60 shows the following positions and reveals the type of student (degree, non-degree) recommended to occupy each position.

Position	Type of Student
Administrative Assistant	Graduate student
Systems and Procedures Analyst (2)	Senior degree student
Executive Secretary	
Department Manager (4)	
Assistant Manager (2)	
MT/ST Operator	Sophomore degree or non-degree student
Reproduction Operator (2)	
Transcriber (1)	
Stenographer (3)	
Secretary (4)	
Supervisor (2)	

Major departments shown in the chart include:

- Systems and Procedures
- Production
- Accounting
- Marketing
- Administrative Services

Two of the major departments are split into divisions: the Administrative Services Department into Personnel and Instructional Materials; and the Production Department into Communication and Reproduction.

Department objectives and responsibilities applicable to the organization chart on page 60 were developed and are listed below. In Part IV, under Job Descriptions (see page 80), is presented the procedure by which these objectives and responsibilities were developed, as well as the procedure by which the managers' job descriptions were derived from the department objectives and responsibilities.

Systems and Procedures Department

Department objectives. To improve existing systems and procedures and to design and implement new systems and procedures.

Department responsibilities

1. Review office systems, procedures, and methods design and implementation
2. Analyze office machines and equipment to advise what type of machine should be used for a specific type of work
3. Recommend the most effective arrangement of office facilities
4. Recommend the most efficient methods of completing work
5. Study inputs and outputs of present systems to determine if it is operating effectively
6. Maintain good human relations between the various department managers
7. Design forms
8. Consult with on- and off-campus offices

Production Department

Department objective. To efficiently collect, complete, and distribute all work requests with goodwill, speed, and quality for the customer in order to produce a profit for the OSC.

Department responsibilities

1. Receive customers sent to the Department from the OSC receptionist
2. Prepare Reproduction Work Order and Communications Work Order forms
3. Route and schedule work load through the Reproduction and Communications divisions
4. Delegate authority and responsibility within the Department and the Reproduction and Communications divisions
5. Set standards of quality control and maintain those standards
6. Maintain adequate supply level for the Department and the Reproduction and Communications divisions
7. Distribute completed work to the customer
8. Approve new Production Department employees, handle employee dissatisfaction, keep Employee Work Record, supervise, evaluate, and motivate employees
9. Keep Department employees informed of the responsibilities of each person in the OSC
10. Prepare periodic production reports for top management
11. Meet with other managers
12. Control office costs to create profit

Production Department--Communications Division

Division objective. To complete all job assignments in the most efficient way possible to encourage continued patronage by customers.

Division responsibilities

1. Schedule job assignments as they are received
2. Assign priority to jobs if necessary
3. Assign jobs to individual workers

4. Check completed jobs against instructions on the Work Order form
5. Consult Production Manager to schedule new or upcoming jobs
6. Maintain sufficient supplies
7. Arrange for repair work needed
8. Handle any questions or problems relating to the jobs currently in production

Production Department--Reproduction Division

Division objective. To perform all reproduction work as efficiently as possible to encourage continued patronage by customers.

Division responsibilities

1. Schedule work load
2. Maintain cost efficiency
3. Order an adequate amount of supplies
4. Route jobs to Duplicating Operators
5. Maintain standards for quality work
6. Budget supplies
7. Reproduce work efficiently
8. Handle customer dissatisfaction for work performed in Division

Accounting Department

Department objectives. To provide internal reporting to department managers for use in planning and controlling current operations; to provide internal reporting to top management for use in making special decisions and in formulating long-range plans; and to provide external reporting to the Comptroller's Office of Texas Tech University.

Department responsibilities

1. Control the inflow and expenditures of funds
2. Establish and maintain a recordkeeping system
3. Maintain a cash flow control
4. Prepare reports showing where and how much money was spent
5. Establish cost control measures and standards
6. Establish a system for determining how much to charge for OSC services
7. Maintain control over all expenditures

Marketing Department

Department objectives. To provide sufficient advertising to encourage people to bring "live" work to the OSC and to conduct pertinent research to determine the needs and desires of OSC customers.

Department responsibilities

1. Determine methods of stimulating "live" sales
2. Select advertising media

3. Make person-to-person customer contacts
4. Prepare copy for advertising
5. Maintain good public relations with both business and campus communities
6. Determine, by working with the Production and Accounting managers and Systems and Procedures Analysts, the pricing structure for OSC services
7. Negotiate and formalize written contracts for OSC services
8. Prepare marketing reports for top management

Administrative Services Department

Department objective. To maintain and promote employee welfare and to perform services needed by all departments.

Department responsibilities

1. Initiate insurance and hospitalization policies for OSC personnel
2. Supervise building maintenance such as lighting, heating, cooling, etc., which provide for good working conditions
3. Build and maintain employee morale
4. Provide security measures for material and machines
5. Approve requisitions for supplies and machines
6. Handle employee grievances promptly and fairly
7. Promote office safety
8. Provide mail-related services
9. Operate a Placement Service Center to help students leaving the BELSystem to find full-time paid employment in jobs representing their career objectives

Administrative Services Department--Personnel Division

Department objective. To fulfill the staff function of procurement, development, compensation, integration, and maintenance of human resources to result in optimum utilization of OSC manpower.

Department responsibilities

Procurement
1. Administer personnel placement tests
2. Interview potential employees
3. Make placement recommendations

Development
1. Administer and design courses for employees
2. Coordinate rotations and transfers in order to give students wide range of experience
3. Consult with businessmen on current personnel problems in order to develop the Personnel Manager

Compensation
1. Design and explain fringe benefit packages
2. Engage in collective bargaining with elected union representatives concerning benefits, hours, and working conditions

Integration
1. Administer and develop orientation programs
2. Counsel with employees and employers
3. Handle grievances

Maintenance
1. Design personnel forms
2. Distribute and file evaluation and other forms
3. Follow-up other duties by conducting attitude surveys

Administrative Services Department--Instructional Materials Division

Department objectives. To prepare office- and education-related instructional materials for sale to students, faculty, and businessmen. To distribute and to revise OSC-related instructional materials as employee performance in the Center warrants.

Department responsibilities

1. Prepare instructional materials
2. Classify instructional materials
3. Select audiovisual equipment for the OSC
4. Consult with managers of the OSC to determine instructional materials and audiovisual equipment needs
5. Maintain an adequate amount of supplies to be used in the preparation of instructional materials
6. Organize the scheduling and use of audiovisual materials

Non-Degree Students

A different organizational structure might be used to provide a realistic capstone experience in the OSC for, exclusively, students enrolled in many types of special programs, including: handicapped students, disadvantaged students; students in one- and two-year programs; bilingual students; employee and student preservice and in-service training; vocational rehabilitation students; returning veterans; adults.

The organization chart on page 66 incorporates the types of departments and positions which might be appropriate to a special preservice program designed for disadvantaged adults. A glance at the chart shows that there is little duplication between the positions included in this chart and those included in the chart for degree students (see page 60). This is not surprising, however, since the career objectives, if realistic, for such a student enrolled in a crash training program would not be the same as those career objectives chosen by degree candidates. To illustrate, a special program disadvantaged adult would not logically aspire to become a Systems and Procedures Analyst in a crash training

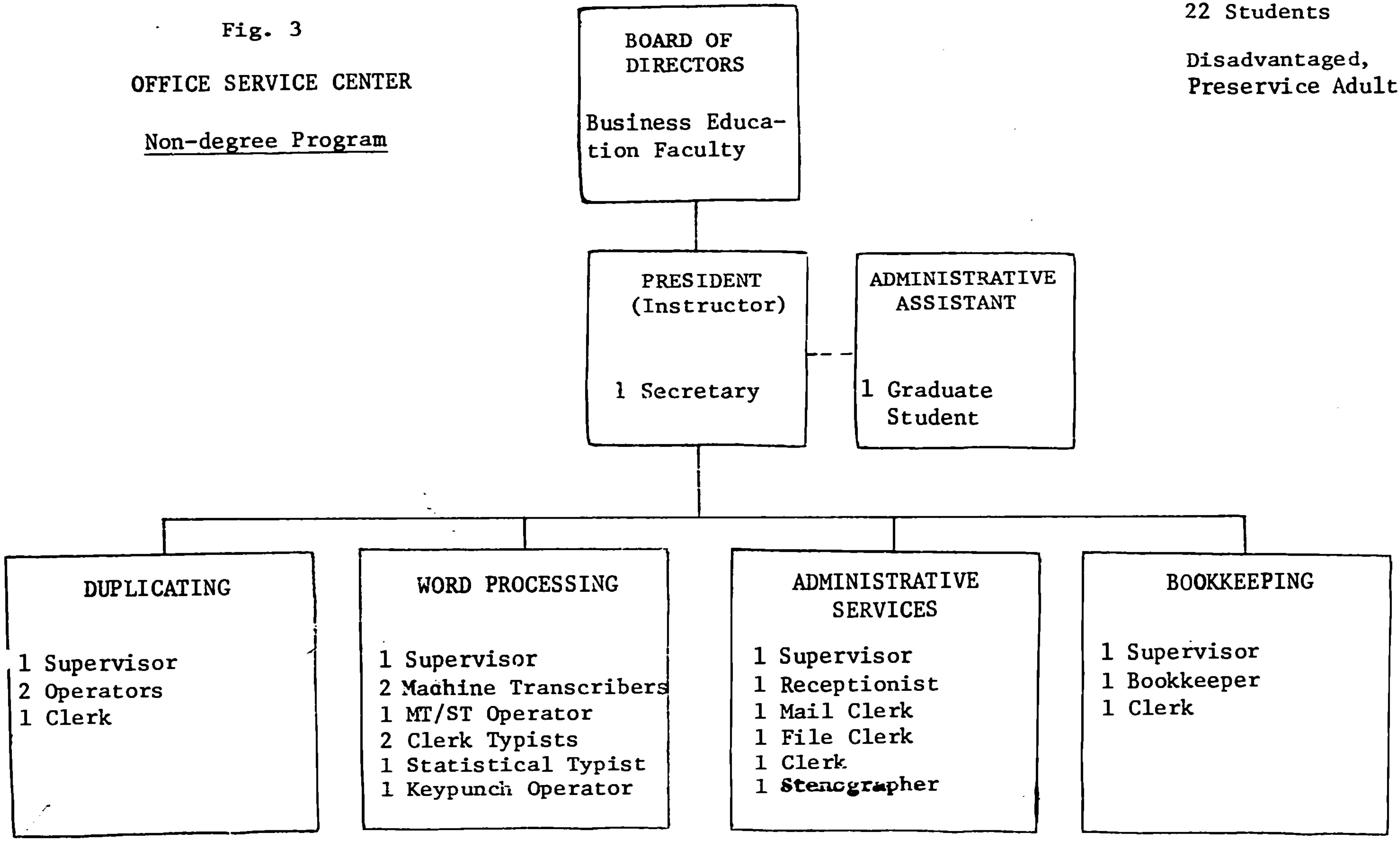
Fig. 3

OFFICE SERVICE CENTER

Non-degree Program

22 Students

Disadvantaged,
Preservice Adults


BOARD OF DIRECTORS
Business Education Faculty
PRESIDENT (Instructor)
1 Secretary
ADMINISTRATIVE ASSISTANT
1 Graduate Student
DUPLICATING
1 Supervisor
2 Operators
1 Clerk
WORD PROCESSING
1 Supervisor
2 Machine Transcribers
1 MT/ST Operator
2 Clerk Typists
1 Statistical Typist
1 Keypunch Operator
ADMINISTRATIVE SERVICES
1 Supervisor
1 Receptionist
1 Mail Clerk
1 File Clerk
1 Clerk
1 Stenographer
BOOKKEEPING
1 Supervisor
1 Bookkeeper
1 Clerk

program because the length of the training period would not justify such an ambition. On the other hand, the positions included in the chart should accommodate the possibility of promotion to a higher level position; thus the positions of Secretary and Departmental Supervisor are included.

Through rotation among various positions, disadvantaged adult students can develop competencies in performing the typical duties associated with any one, any combination, or all of the following positions:

Clerk
Mail Clerk
File Clerk
Clerk Typist
MT/ST Operator
Bookkeeper
Duplicating Operator
Machine Transcriber
Statistical Typist
Keypunch Operator
Receptionist
Stenographer

Through promotion, disadvantaged adult students can develop competencies in performing typical duties associated with the positions of:

Secretary
Department Supervisor

Location and Layout of the OSC

The office is the information processing center of any organization. As such, it is extremely important, since management decisions are no better than the information upon which they are based. How efficiently information is processed depends to some degree upon the layout of the office.

The layout on page 68 is an actual room on the Texas Tech campus. It accommodates the OSC departments shown in the organizational chart on page 60. The layout, planned by a student, is only one of the many possible layouts for the Office Service Center utilizing a single room. Landscaping, as well as some of the other latest trends in office layout, is incorporated into this layout.

During the next school year, interested Office Management students will be encouraged to develop alternative layouts: one for a series of connected rooms, and another for an "L" shaped room. After the OSC begins operating, students enrolled in Office Management and Administrative Management classes will be constantly planning and implementing layout improvements.

OSC Equipment

Each Internship student involved in the job analysis of Lubbock office workers prepared a List of Equipment Needed for his assigned position in the OSC. Under Question 7 on the Job Information form,

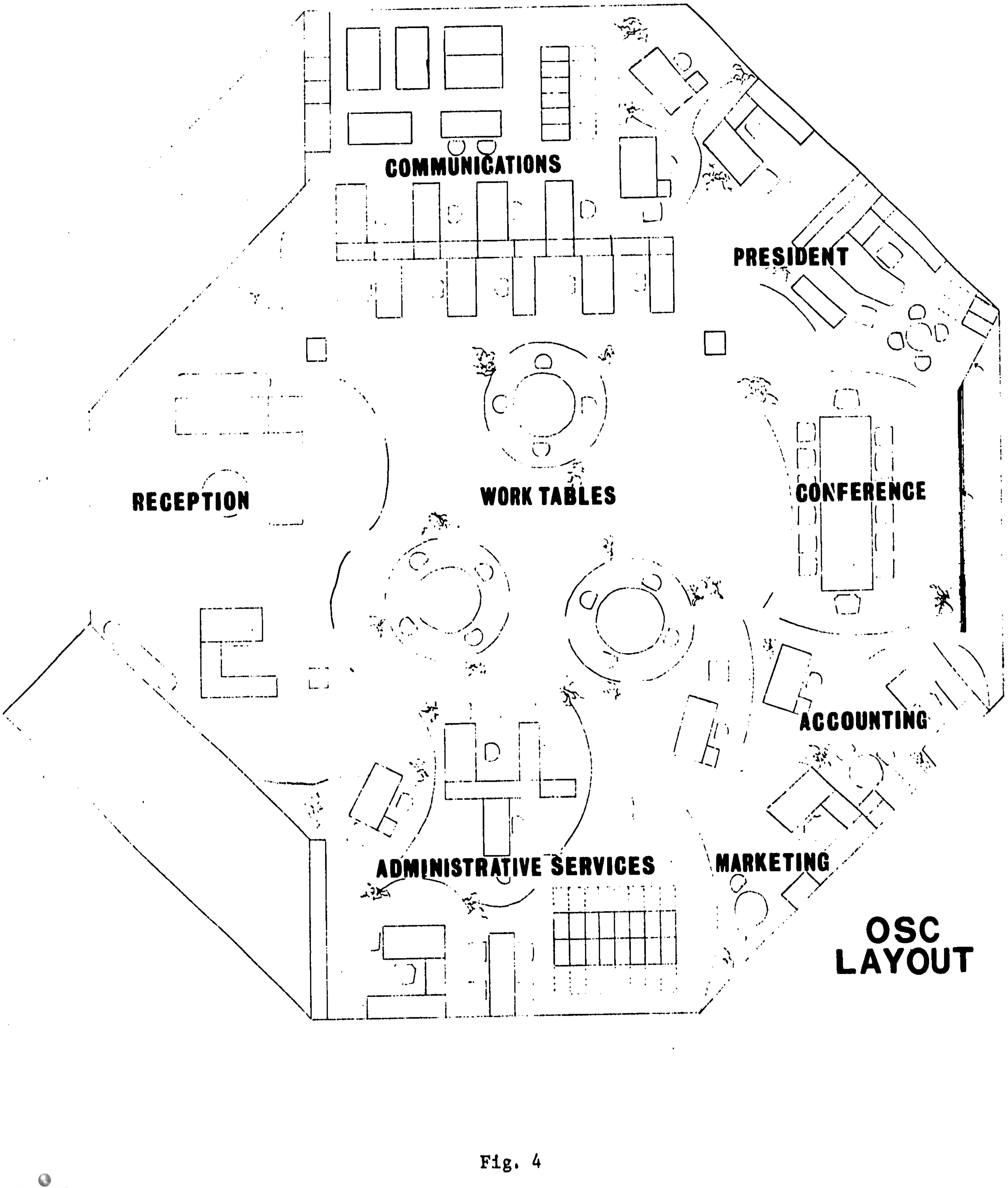

COMMUNICATIONS
PRESIDENT
RECEPTION
WORK TABLES
CONFERENCE
ACCOUNTING
ADMINISTRATIVE SERVICES
MARKETING
OSC
LAYOUT

Fig. 4

interns made a composite listing of Machines and Other Equipment Used from information recorded during interviews on Job Analysis forms. On the basis of the intern's knowledge of his specific position in the OSC, revisions were made on the list. Each student was provided with an Office Products Categorization list (see Appendix D, page 104) from which to select additional equipment for his position.

The total for each piece of equipment was recorded in the Quantity Needed column of Table 2, page 70. Equipment currently in the Business Education Department at Texas Tech was recorded in the On Hand column and subtracted from the Quantity Needed to determine what must be purchased. Unit Cost for each item was multiplied by the Quantity to Purchase to determine Total Cost.

The estimated Grand Total Cost for equipment to begin operating the OSC in Fall 1972 is $14,054. The estimated Monthly Charges for rental of equipment would be $370.

Financial and Advisory Support for Future BELS Research, Development, and Implementation

Financial

The BELSystem involves both degree and non-degree students (including handicapped, disadvantaged, returning veterans, etc.); therefore, funding may be partially from higher education and partially from less-than-baccalaureate-degree education funds. In an effort to determine sources of possible financial support for future BELS research and development, as well as implementation, the following literature was searched:

1. Appropriate Guide to Federal Assistance to Education[4] folders obtained through Texas Tech's Office of Research Services. Each Guide offered such information as the legal citation under which funding is made available, types of institutions eligible to apply, the nature of programs likely to be funded, the steps necessary to apply, and the addresses of persons to contact for more information.

2. The Foundation Directory, 1967.[5] The Directory lists corporations and trusts possessing assets of at least $200,000 or distributes annually $10,000 or more in grants.

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[4] Robert E. Horn. Guide to Federal Assistance for Education, Education Division, Meredith Corporation.

[5] Marianna O. Lewis, Editor, The Foundation Directory, New York, Russell Sage Foundation, 1967.

TABLE 2

ESTIMATED COST OF
EQUIPMENT NEEDED FOR OSC

Equipment	Quantity Needed	On Hand	To Purchase	Unit Cost	Total Cost
Appliances					
Collator, mechanical	1	0	1	$500	$ 500
Copyholder					
Forward reading	1	0	1	50	50
Side reading	10	8	2	2	4
Correspondence tray, 2 tier	25	0	25	5	125
Desk book ends	25	0	25	1	25
Desk calendar holder	24	0	24	1	24
Envelope opener, manual	23	0	23	1	23
Form register	1	0	1	6	6
Name plate, with movable letters	25	0	25	6	150
Paper cutter	1	0	1	10	10
Paper punch	1	0	1	7	7
Pencil sharpener	3	3	0	--	--
Posting tray	1	0	1	25	25
Scissors	25	3	22	2	44
Stamps					
Dating	1	0	1	10	10
Numbering	1	1	0	--	--
Rubber	10	0	10	3	30
Stapler					
Electric	1	0	1	25	25
Manual	24	2	22	3	66
Time clock	1	0	1	275	275
Total Appliance Cost					$ 1,399
Furniture					
Chalk board and chart stand	1	0	1	50	50
File cabinets					
Horizontal	1	0	1	70	70
Vertical					
Letter	13	7	6	80	480
Stencil	1	0	1	80	80
Safe	1	0	1	500	500
Waste basket	25	13	12	2	24
Cabinet storage	9	0	9	50	450
Clothing rack	4	4	0	--	--

TABLE 2--Continued

Equipment	Quantity Needed	On Hand	To Purchase	Unit Cost	Total Cost
Chair					
Executive swivel	8	0	8	$100	$ 800
Secretarial	24	24	0	--	--
Visitor	10	10	0	--	--
Desk					
Executive	10	10	0	--	--
Secretarial "L"	15	15	0	--	--
Table					
Conference	1	1	0	--	--
Work	13	13	0	--	--
Total Furniture Cost					$ 2,454
Machines					
Calculating					
Electronic listing	9	2	7	800	5,600
Copiers					
Electrostatic	1	1	0	--	--
Infrared	1	1	0	--	--
Dictating and Transcribing					
Belt unit	4	4	0	--	--
Remote system	1	0	1	--	4,295
Duplicating					
Fluid	1	1	0	--	--
Offset	1	1	0	--	--
Stencil	1	1	0	--	--
Mailing					
Scales	1	0	1	20	20
Typewriter					
Electric	5	5	0	--	--
Electric, long-carriage	5	5	0	--	--
Manual	13	13	0	--	--
Visual Aids					
Film projector	1	1	0	--	--
Opaque projector	1	1	0	--	--
Overhead projector	1	1	0	--	--
Slide projector	1	1	0	--	--
Tape recorder	1	1	0	--	--
Video tape	1	1	0	--	--
Total Machines Cost					$ 9,915

ERIC Full Text Provided by ERIC

TABLE 2--Continued

Equipment	Quantity Needed	On Hand	To Purchase	Unit Cost	Total Cost
Miscellaneous					
Ash tray	19	19	0	$ --	$ --
Dictionaries	20	3	17	8	136
Reference Books	50	0	50	3	150
Total Miscellaneous Cost					$ 286
GRAND TOTAL					$14,054
Monthly Charges					
Telephone					$ 120
Automatic typewriter					250
Total Monthly Charges					$ 370

3. The Annual Register of Grant Support,[6] This reference lists, under official foundation names, the same types of information found in Guide to Federal Assistance to Education folders (see Item 1).

On the basis of the investigation procedure described, the following sources for possible BELS financial assistance are cited:

Federal and/or State assistance

1. Public Law 90-576 (Vocational Education Amendments of 1968), Title I:

   - Part B--State Vocational Education Programs
   - Part C--Research and Training in Vocational Education
   - Part D--Exemplary Programs or Projects
   - Part I--Curriculum Development in Vocational and Technical Education

2. Public Law 90-35 (Education Professions Development Act, an amendment to Title V of the Higher Education Act of 1965):

   - Part B-1
   - Part C
   - Part D
   - Part F

3. Unsolicited Applied Research Program, Division of Research, National Center for Educational Research and Development

Foundations

1. Carnegie Corporation of New York
589 Fifth Avenue
New York, NY 10017

2. Continental Oil Company
Committee on Financial Aid to Education
P.O. Box 2197
Houston, TX 77001

3. Esso Education Foundation
49 West 49th Street
New York, NY 10020

4. Ford Foundation
320 East 43rd Street
New York, NY 10017

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[6] Jean L. Aroeste, Editor. The Annual Register of Grant Support, Los Angeles, Academic Media, 1970.

5. General Electric Foundation
Crotonville, P.O. Box 791
Ossining, NY 10562

6. W. K. Kellogg Foundation
400 North Avenue
Battle Creek, MI 49016

7. Alfred P. Sloan Foundation
630 Fifth Avenue
New York, NY 10020

Advisory

To obtain information and advice about the research project, a number of contacts with knowledgeable individuals were made, both by telephone and in person.

Conversation, by telephone, with the following NOBELS researchers concerned information for a procedure to identify "pure" tasks:

1. Dr. Lawrence W. Erickson, Associate Dean, UCLA Graduate School of Education, Los Angeles, California

2. Dr. Harry Huffman, Professor, Business and Office Education, Colorado State University, Fort Collins, Colorado

3. Dr. Edward J. Morrison, Coordinator, Research and Development, Center for Vocational and Technical Education, Columbus, Ohio

Below are presented, under the name of the BELS researcher who made the contact, the location and date of the contact, the person or group of persons consulted, and the topic(s) discussed.

William R. Pasewark. In May, 1971, at the annual convention of the Administrative Management Society in Houston, Texas, the following persons were contacted:

1. Walter Kleinschrod, Editor, Administrative Management magazine. Dr. Kleinschrod suggested names of persons and companies involved in efforts to improve office efficiency.

2. R. C. Walters, Executive Director, Administrative Management Society. Recent office innovations, leaders in office administration research, and the nature of BELS' Office Research Institute were topics discussed.

3. Santiago Gonzales, Director, Intensive Training Unit, Office of Economic Opportunity, San Francisco, California. Since Mr. Gonzales has had several years' experience in directing a program of disadvantaged minority group adults in a simulated office laboratory, he reported observations which should prove valuable in working with similar special program groups in BELS.

4. College of the Mainland Business Department faculty. Since College of the Mainland is especially progressive in the use of individualized instruction materials and since it was located near Houston, the project director visited this facility before returning after the AMS convention. Business Department faculty explained their individualized instruction lab and offered advice on multi-media approaches to learning.

In July, 1971, the following contacts were made in Washington, D.C.:

1. O. J. Byrnside, Executive Director, National Business Education Association. Sources of funding for BELS.

2. Larry Lynett, Manager, Administrative Research, IBM, Armonk, N. Y. Research in office administration; Implications of BELS for American business.

3. George Mahon, U. S. Representative, 19th Congressional District. Explanation and discussion of BELS.

U. S. Department of Labor, Women's Bureau

4. Mildred T. Crosby, Economic Research Assistant, Economic Status and Opportunity Division. Women's career education.

5. Elizabeth Koontz, Director. Brief conversation on women's education.

6. Jean Wells, Special Assistant to the Director. Office education programs for women; Women's career education.

7. Arleen Winfield, Social Science Research Analyst, Labor Force Research Branch, Economic Status and Opportunity Division. Office career publications; Women's career education.

U. S. Office of Education

8. Loyd Briggs, Director, Vocational Education Personnel Branch (EPDA), Bureau of Vocational and Technical Education. Educational Professional Development Act funding; Performance-based teacher education programs.

9. Joyce Deckman, Specialist, Exemplary Programs and Services, Bureau of Vocational and Technical Education. Exemplary program funding,

10. Sidney High, Director, Exemplary Programs and Services, Bureau of Vocational and Technical Education. Exemplary program funding,

11. Howard Hjelm, Director, Division of Research, National Center for Educational Research and Development. Unsolicited Applied Research Program support.

12. Duane Nielson, Chief, Teacher Education, National Center for Educational Research and Development. Brief discussion on solicited research projects support.

13. Frank Perazzoli, Program Specialist, Vocational Education Personnel Branch (EPDA), Bureau of Vocational and Technical Education. Educational Professional Development Act funding; Performance-based teacher education programs.

14. James Wykle, Specialist, Business and Office Occupations. Explanation of BELS; Sources for funding.

In July, 1971, the following contacts were made at the Center for Vocational and Technical Education, The Ohio State University, Columbus, Ohio:

1. Sidney D. Borcher, Research and Development Specialist, Instructional Systems Development. Task analysis.

2. Edward Ferguson, Chairman, Personnel Development Area, Teacher Education. Performance-based teacher education.

3. Joel Magisos, Coordinator, Information Services. Sources of vocational and technical information.

4. A. J. Miller, Coordinator, Special Services. Career education kindergarten to the 14th grade.

5. Edward Morrison, Coordinator, Research and Development. Sources for funding; Occupational information to develop curricula.

6. Frank Pratzner, Chairman, Instructional Systems Development. Instructional systems; Performance-based curricula.

William R. Pasewark and Dolores Kilchenstein. In June, 1971, at the Mountain Plains Business Education Association convention in San Antonio, Texas, these persons were contacted:

1. Millard Collins, Director, Office Products Division, IBM. Office equipment, instructional materials, and future plans for the Office Research Institute were topics discussed.

2. John Evans, Vice President, Media Systems Corporation. Since Mr. Evans sells a popular multi-media system for individualizing instruction in business education courses--AVT (Audio-Visual-Tutorial), he was asked for names and addresses of persons using his system. In response to reservations expressed by project researchers, he offered advice on how to effectively administer, operate, and control the AVT lab.

3. O. J. Byrnside, Executive Director, National Business Education Association, and Victor Van Hook, Business Education Consultant, State of Oklahoma. Both Dr. Byrnside and Mr. Van Hook made suggestions on possible sources of future advisory and financial support for the further development and implementation of the BELSystem.

Dolores Kilchenstein. In February, 1971, selected faculty at Lansing Community College and Michigan State University, Lansing, Michigan, were consulted for information on innovative individualized and group instruction strategies, as well as on software available for office programs. Faculty members consulted included:

1. John Kraeer, Department of Office Administration, Michigan State University. Dr. Kraeer planned and starred in a series of videotaped shorthand lessons that are currently being used to teach shorthand classes at the University. A TV shorthand class was observed. In an interview with Dr. Kraeer, he related problems encountered in making the tapes and responded to questions about the success of the TV approach.

2. Robert Poland, Business Education Department, Michigan State University. Dr. Poland responded to questions about the series of typewriting videotapes which he planned and in which he performed. These TV tapes are used currently in University typewriting classes. Dr. Poland offered information on slide-tape kits which he has prepared, and which he is planning to prepare, on typewriting.

3. Ronald K. Edwards, Chairman, Accounting and Office Programs, Lansing Community College. Dr. Edwards hosted an informative visit to his AVT laboratory. He offered advice on hardware and software available, also on the advantages of an individualized instruction lab. Since he and his faculty prepared most of the AVT software, he was knowledgeable about the positive features of both the individualized instruction approach to education and about the nature of the AVT software available.

4. Joe Zombar, Ph.D. candidate in Business Education, Michigan State University. Because Mr. Zombar, to satisfy a course requirement, had interned as an instructor in the AVT lab at Lansing Community College, he was well qualified to offer a teacher's observations. Problems involved in control, as well as coordination, were discussed.

Ronald D. Johnson. In February, 1971, Dr. Pat Patsloff, Business Education Department, Southern Illinois University, Edwardsville, Illinois, was consulted on the topic of multi-media instructional materials. Dr. Patsloff planned and currently manages the operation of a lab that features PAMI Learning Systems. Since she authored much of the software used in the lab, she offered information on the types of business education programs available through PAMI Learning Systems.

IV. PROCEDURES FOR DEVELOPING OSC-RELATED MATERIALS

Work Input

The types of work to be performed in the Office Service Center can be classified into three types: "live," generated, and simulated. "Live" and simulated work are injected into the Center; therefore, they can be considered as work input. Generated work, however, is not injected into the OSC; instead, it is created by the normal internal operations necessary to operate the OSC. Since this section is concerned only with work to be injected into the Center, generated work is not discussed.

Live Work

It is anticipated that work submitted from each of the following sources will provide the "live" work to be performed by OSC employees.

On-Campus

Administrative Offices
Faculty
Student Body
Student Organizations

Off-Campus

Businesses
Individuals

As part of an effort to acquaint these sources with the nature of the OSC and the types of services to be performed, for a fee, in the Center, an advertising brochure might be prepared and distributed. Through visits to offices on and off campus, students operating the OSC during an experimental trial run in the spring of 1972 can use this brochure to persuade prospective customers to use the Center. An attempt will be made to convince owners of small businesses downtown who do their own office work that some of their work can be performed by OSC employees. Businesses who hire regular office workers will be approached from the standpoint of the value of the OSC in leveling peak work periods during the year.

As a class project, a Report Writing class surveyed students in some Texas Tech classes. The results showed that 56.6% of the students surveyed would use the OSC if it were available. Services requested most often included typing, duplicating, and keypunching.

To identify more completely the "live" work which will be sent to the Center, students who might express interest in survey-type projects while enrolled in communications classes will be encouraged to survey faculty, administrative offices on campus, or downtown businesses.

The questionnaire and tally sheet included in Appendices E and F, pages 106 and 108, respectively, can be used as guides in future surveys.

Simulated Work

Simulated tasks will be injected, as necessary, into the OSC to accomplish three primary objectives:

1. To keep the volumne of work in the OSC at a level appropriate to the potential of office personnel. If "live" and generated tasks are not sufficient, simulated tasks will be directed to those who need work to perform.
2. To provide opportunities for OSC personnel to improve in areas of observed weakness. For example, if an employee who receives and directs incoming phone calls does not perform satisfactorily when handling "live" calls, an effort will be made to retrain the employee to use effective telephone techniques. Carefully planned simulated calls will then be fed into the deficient worker's tasks to give the employee a chance to improve.
3. To insure adequate educational preparation to enable the student, after his OSC experience, to perform successfully, in any office in the business world, the typical tasks associated with his career objective.

The accomplishment of the last objective listed is not possible at this time because thus far, necessary research has not been conducted to identify a core of priority office tasks that are common to all businesses, regardless of size or nature. This list of priority tasks, if available, should be used as a yardstick, or standard, against which to compare the list of "live" and generated tasks to be performed in the OSC.

Phase I of NOBELS, on the basis of 1232 interviews conducted with supervisors and office workers in businesses of all types located in major sections of the United States, developed 375 performance goals for the 4,548 basic tasks reported by those interviewed.[1] However, the selection, from that list of 375, of priority performance goals (those for which business education curriculum developers should make sure educational experiences are incorporated) has not yet been done.

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[1] Frank Lanham. Development of Performance Goals for a New Office and Business Education Learnings System, Project No. 8-0414, Grant No. OEG-0-0-080414-3733 (083), April, 1970.

A study of the 375 performance goals indicates that it is impossible, as well as unnecessary, to include all 375 in the OSC.

In addition, NOBELS research completed thus far investigated only workers' tasks; managers' tasks and responsibilities were not included. This means that before a priority list of managers' tasks and responsibilities can be developed, data must be collected from managers who are working on the job. In other words, a project similar to Phase I of NOBELS, a sizable undertaking, will need to be conducted to identify managers' tasks and responsibilities.

When a scientific study has produced a priority list of office tasks and responsibilities for both managers and workers, the procedure for determining the tasks to be simulated in the OSC might be:

1. To compare the list of "live" and generated OSC tasks (which was developed based on the job analyses conducted by senior Internship students) with the list of priority office tasks (which will be developed, from NOBELS research, based on commonality of performance in all business offices);
2. To identify any tasks which the priority list includes but which are not included in the list of OSC "live" and generated tasks; and
3. To design simulated tasks for tasks identified on the priority list but which cannot be found in the list of OSC "live" and generated tasks.

Job Descriptions

Even though the proposal stated that, in the report, only a procedure would be developed for preparing job descriptions, actual job descriptions were prepared. These are, therefore, presented beginning on page 81.

Data collected in the job analysis described on page 24 served as a basis for determining the nature of both the sophomore worker and the senior manager positions included in the organization chart on page 60. Even though students composed job descriptions, it was necessary for project researchers to spend considerable time and effort reconciling the statements reported by students as "tasks" with the stated objectives and responsibilities of the departments in order to produce realistic job descriptions. Thus, the job descriptions presented here scarcely resemble those submitted by students.

Since department objectives and responsibilities define the scope of activities within a department, before job descriptions could be written, it was necessary to develop department descriptions for each of the departments included in the organization chart on page 60. These descriptions included department objectives, responsibilities, and the managers' job descriptions.

Students were instructed to use a standardized procedure utilizing guide questions to prepare department descriptions; details of this procedure are given in the next four paragraphs.

The guide question used to identify department objectives was: "What must the department do in order to keep the business operating at a profit?" Assuming that one of the major goals of most businesses is profit, each department can function properly only if its personnel realize how they contribute to that goal.

Department responsibilities include major activities which, if properly performed, will accomplish the department objectives. The guide question used to develop department responsibilities was: "With what major activities must department personnel be concerned in order to accomplish department objectives?"

Because the manager of each department is the one who is ultimately accountable for its success, each manager's job description was included with the department objectives and responsibilities. The question used as a guide to developing managers' job descriptions was: "What must the manager do in order to assure that his department's objectives are met?" The answer to this question necessarily involved consideration of the department responsibilities identified previously, but it also involved an additional dimension--supervising departmental personnel as they engaged in activities to achieve departmental objectives.

An examination of the department responsibilities of the Marketing Department listed on page 63 shows that the department responsibilities can be categorized to fit into two broad areas of responsibility: (a) dealing with customers and advertising companies, and (b) conducting and writing reports. However, in order to insure that the department performs satisfactorily its assigned responsibilities, the Marketing Manager must supervise his personnel. Therefore, the managers' job descriptions include this important aspect of the managers' responsibilities.

Managers' and workers' job descriptions follow.

Administrative Assistant

Assists the President in administering the overall operation of the OSC. Coordinates the collection and preparation of operating reports, such as time-and-attendance records, terminations, new employees, transfers, budget expenditures, and statistical records of performance data. Synthesizes reports and consults with President about their implications. Analyzes reporting systems to simplify information processing. Prepares budgets and oversees their administration. Prepares annual reports for review by the President and the Board. As requested, interprets simply and briefly complex written reports to the President. Composes, issues, and interprets operating policies previously determined. Substitutes for the President in his absence.

Systems and Procedures Analyst

Studies OSC operations to simplify work and improve office efficiency. Investigates and analyzes areas which are not functioning according to management's needs or expectations. Analyzes operating practices, such as recordkeeping systems, forms control, supplies control, office layout, suggestion systems, and techniques for evaluating performance. Analyzes jobs to determine position responsibilities for use in wage-and-salary adjustments, promotions, and evaluation of workflow. Measures office work and studies methods and procedures in order to revise systems and processes, or design new ones, to improve OSC efficiency. Investigates new office machines, equipment, and appliances pertinent to OSC operation. Writes reports to communicate the findings of his studies and to make recommendations for changes. Prepares verbal explanations of procedures, and designs procedure flow charts. Studies and revises office forms, position manuals, and the office manual as performance in the OSC warrants. Assists in orienting employees to new policies and in implementing new systems, processes, methods, and procedures.

Executive Secretary

Acts as intermediary between department managers and policy-making officials. Represents the company and the President attractively and effectively to the public, facilitating communications and flow of work between the executive and persons, both inside and outside the OSC, who have business with the President. Relieves President of office administrative routine. Schedules appointments for President, Administrative Assistant, and Systems and Procedures Analysts. Screens callers and visitors for President, Administrative Assistant, and Systems and Procedures Analysts, directing to other personnel those who do not warrant seeing the executive or his staff assistants. Answers routine correspondence. Makes confidential contacts and maintains special top management files. Coordinates scheduling, preparation and use of conference facilities for executive meetings called by the President. Records, from dictation, and transcribes Board meeting minutes, also confidential communications for President, Administrative Assistant, and Systems and Procedures Analysts. Edits reports and other written communications composed by the Administrative Assistant and the Systems and Procedures Analysts for executive review, as well as written communications composed by the President for the Board. Assumes responsibility for getting such reports and written communications reproduced. Assumes responsibility for much of the tedious detail work of the executive office.

Production Department

Manager. Routes, schedules, and coordinates work performed in the Reproduction and Communication divisions. Accepts from customers "live" work to be performed by Production employees; records pertinent instructions on Work Order forms. Distributes completed work to customers. Assumes responsibility for the quality of work produced by Department employees. Meets with other managers and submits periodic production reports to top management. Consults with Communications and Reproduction supervisors about Division problems. Works with Systems and Procedures Analysts to analyze methods and procedures practiced in Production Department; suggests alternatives. Prepares Department budget.

Secretary. Serves as receptionist and hostess for the OSC. Takes dictation and transcribes notes. Schedules appointments for Production manager, and gives information to callers. Assists manager in compiling Production reports. Composes and types routine Department correspondence. Screens incoming calls. Answers the telephone, routes calls to appropriate divisions, and places outgoing calls. Processes incoming mail. Maintains Production files. Makes travel arrangements for employer. Records proceedings of departmental meetings and prepares typewritten minutes.

Supervisor, Communications Division. Oversees production in his Division. Supervises employees; evaluates and counsels employees concerning their job performance. Checks quality of all work performed by Division employees before releasing it to customers. Assists in establishing and maintaining performance standards. Assists Systems and Procedures Analysts in orienting subordinate employees to new methods and procedures. Interviews potential Communications Division employees and recommends the dismissal of employees, if necessary. Consults with the Production Manager and other managers concerning administrative policies and procedures. Prepares Division budget to submit to Production Manager.

Stenographer, Communications Division. Performs work for both OSC customers and employees. Takes shorthand of correspondence, reports, and other material dictated and transcribes it in acceptable format. Transcribes material from recordings. Performs routine clerical duties when not taking or transcribing dictation.

Transcriber, Communications Division. Performs work for both OSC customers and employees. Transcribes letters, reports, and other recorded data, using transcribing machine and typewriter. Types some unrecorded information such as names, addresses, and dates from material in files. Performs routine clerical duties when not transcribing.

MT/ST Operator, Communications Division. Performs work for both OSC customers and employees. Programs and operates an automatic typewriter that reproduces all kinds of typewritten materials including letters, memos, reports, invoices, bulletins, minutes, duplication masters, tables, and envelopes. Fills in such variable information as names, addresses, and dates. Proofreads all work carefully and makes corrections. Maintains a file of completed work. Estimates the amount of time required to complete a job and schedules work accordingly.

Supervisor, Reproduction Division. Evaluates Reproduction Operators' work and performance. Directs employees in correct methods of performing their work. Assists Systems and Procedures Analysts in evaluating work methods. Schedules the work loads of Reproduction Operators. Establishes quality and quantity goals for specific types of reproduction jobs. Assists Personnel employees in orienting and training new

Division employees. Keeps employees informed of new procedures and policies. Controls supplies and equipment. Prepares Division budget to submit to Production Manager.

Operator, Reproduction Division. Reproduces copies for both OSC customers and employees. Prepares various duplicating machines for operation. Anticipates placement problems and adjusts machines accordingly. Maintains adequate supplies. Makes minor adjustments and repairs on machines. Cleans machines when needed. Prepares some originals involving paste-ups and/or art work. Collates and staples duplicated work.

Accounting Department

Manager. Prepares financial statements and payrolls for customers. Audits books for owners of small businesses. Installs and maintains operation of general accounting systems for OSC. Provides records of assets, liabilities, and financial transactions of the OSC. Maintains accounts and records or supervises subordinate in such bookkeeping activities as recording disbursements, expenses, or tax payments. Maintains accounting controls over inventories or purchases. Audits contracts, orders, and vouchers and prepares appropriate reports. Prepares and files tax returns and other regular and special reports to government agencies. Prepares Department budget.

Secretary. Performs simple accounting duties for customers. Assists Accounting Manager in compiling, classifying, and recording OSC financial data. Prepares typewritten financial statements and reports. Takes shorthand and transcribes dictation of Accounting communications. Transcribes machine dictation. Schedules appointments for Manager. Composes and types routine correspondence. Answers the telephone, routes calls to other departments, and places outgoing calls. Reads and routes incoming mail. Maintains Department files. Makes travel arrangements for employer.

Marketing Department

Manager. Maintains and supervises mail and phone contacts with OSC customers and prospective customers; also companies that do advertising for the OSC. Conducts surveys and writes reports on the results. Supervises Marketing Department secretary.

Secretary. Performs Marketing-related services for OSC customers such as conducting phone surveys and composing publicity releases. Assists the manager in preparing advertising plans to market OSC services. Aids in conducting pertinent marketing research and edits reports showing results of the research. Records shorthand from dictation of correspondence with customers and potential customers and transcribes in acceptable format. Transcribes machine dictation. Schedules appointments. Composes and types routine Department correspondence. Answers the telephone, gives information to potential customers about OSC services, routes calls to other departments, and places outgoing calls. Reads and routes incoming mail. Maintains departmental files. Edits written advertisements composed by Marketing Manager and maintains records of where and how long advertisements were run. Arranges conferences and speaking engagements for the manager to inform the public of OSC services.

Administrative Services Department

Manager. Provides services that maintain and promote employee welfare. Maintains OSC in regard to heating, lighting, cooling, and cleaning. Consults with supervisors of Instructional Materials and Personnel divisions. Consults with on- and off-campus offices about procedures pertinent to Department responsibilities. Prepares Department budget.

Secretary. Directs visiting customers with work to be performed to appropriate Division supervisor in the Production Department. Schedules appointments for departmental manager and assistant managers, Takes and transcribes shorthand dictation. Transcribes machine dictation. Composes and types routine correspondence for manager and assistant managers in the department. Answers the telephone, routes calls to other departments, and places outgoing long-distance and local calls. Reads and routes incoming mail to department personnel. Collects and processes outgoing mail for the OSC. Maintains the department's files. Arranges travel schedules and makes reservations for Department Manager. Edits reports written by Administrative Services Manager for top management and follows through to see that they are produced satisfactorily.

Assistant Manager, Personnel Division. Plans and implements Personnel policies. Directs and supervises activities of subordinates. Interviews and tests applicants for OSC positions; selects from applicants interviewed. Orients new employees to overall policies administered in the OSC. Conducts termination interviews, when necessary. Mediates employee grievances. Confers with officials to establish pension and insurance plans. Coordinates social, recreational, and educational activities for employees. Studies Personnel records for information to determine personnel suitable for promotions and transfers. Acts as liaison between management and labor within the organization. Prepares Division budget to submit to Administrative Services Manager.

Stenographer, Personnel Division. Takes shorthand dictation of correspondence with prospective employees and with future employers of reports and Personnel records, and transcribes it in acceptable format. Transcribes material from machine dictation. Performs routine clerical duties, such as updating personnel records, filing, and keeping daily attendance records, when not taking or transcribing dictation.

Assistant Manager, Instructional Materials Division. Supervises the Instructional Materials Stenographer, as well as the work performed in his Division. Assists Systems and Procedures Analysts to prepare and/or revise OSC-related instructional materials such as job manuals and office forms. Prepares office- and education-related instructional materials for sale to students, faculty, and businessmen. Appraises and specifies audiovisual equipment and facilities for the OSC. Establishes and maintains control of audiovisual equipment and instructional programs. Establishes appropriate procedures to have equipment inspected and maintained. Prepares Division budget.

Stenographer, Instructional Materials Division. Takes shorthand dictation of instructional materials and correspondence and transcribes. Transcribes material from machine dictation. Performs routine clerical duties such as checking out instructional materials, assisting people in finding materials, inspecting returned materials for damages, and issuing overdue notices.

Office Procedures and Procedure Flow Charts

Before appropriate procedures can be designed, the major processes, or key operations, to be performed in the Office Service Center must be identified. (Processes can be categorized, along with tasks and systems, into the "whats" of office work; procedures and methods can be categorized into the "hows" of performing office work.) Office management and systems and procedures literature will be examined to get some direction in identifying processes in a typical business--processes which involve more than one work station and for which a procedure is necessary.

Office consulting firms will be contacted to determine whether "canned" procedures and flow charts are commercially available for processes which are common to all business, such as preparation of payroll. Pertinent literature will also be scanned for procedure designs which can be used in the OSC. The flow charts included in Lanham's NOBELS report of 375 performance goals will also be examined with this in mind.

Office consultants may be brought in to aid researchers in designing the necessary procedures and in preparing procedure flow charts for some of the more complicated procedures. To design procedures, it is anticipated that relationships among the following aspects of the OSC will be considered:

1. The nature of the work to be done in the office
2. The assignments of specific work and responsibilities to departments and to positions
3. The work which will necessarily involve more than one work station
4. The physical facilities with which the work is to be performed (office layout, types of equipment and appliances)
5. Possible forms to be used in processing the work

The procedure flow charts produced by researchers will be included, to facilitate communication, in the job manuals of the particular positions involved in effecting the recommended procedures.

The flow-charting of some procedures, even though identified and designed verbally, may be deliberately delayed until the OSC is in operation. It is believed that the experience of flow-charting will be valuable to students who, while enrolled in the Administrative Management class, are serving as OSC managers.

Job Manuals

A job manual for each OSC position will be developed. As a beginning, researchers will analyze and compare the following aspects of job manuals obtained from several nationally recognized companies:

1. Job classifications
2. Job requirements
3. Job training
4. Assigned tasks
5. Writing style
6. Format

Initially, job manuals may include job descriptions, work to be performed, and machines and equipment to be operated.

Some of the data needed to prepare job manuals is recorded on the Job Information forms which were developed by Internship students from job analysis interviews. Review of the Job Information forms, however, suggests that careful analysis, synthesis, and refinement of the information reported must be made. For example, work listed for each position should be checked to see if there is unnecessary duplication of effort among the positions. Decisions must be made on whether to centralize the performance of certain types of activities, such as filing or reporting repairs to be made on office machines. Adjustments will need to be made to the list of work to be performed based on these decisions.

After the necessary adjustments have been made to the list of work to be performed in each position, researchers can consider other types of information reported on the Job Information forms. For example, researchers would analyze whether the education and work experience qualifications, also the physical, mental, and emotional demands, reported on each Job Information form are realistic when considered against the list of work to be performed in the position. If the list of work to be performed on the job has been changed (to promote more effective allocation of work among OSC personnel), it would be possible that the qualifications, in terms of work experience or education, would also need to be changed.

The information under Question 4 on the Job Information forms (see page 101), "Competencies needed for this position," would need to be studied very carefully by researchers before incorporating it into a job manual. In fact, this particular topic of determining competencies is a major research area involving the identification of success criteria for performance in each position. This research area also involves consideration of the many types of possible tests to determine competencies. With the aid of a testing consultant, BELS researchers will need to investigate this topic thoroughly before choosing, or designing if necessary, competency tests for the various positions in the OSC. The information produced in this research, when completed, can be incorporated into the job manual for each position.

Eventually, after the necessary analyzing, synthesizing, and changing has been done on the data included in the Job Information sheets, and after forms and procedures have been developed for the OSC, each job manual could include, in addition to the job descriptions and work to be performed, the following:

1. Job requirements
2. Standards for satisfactory performance
3. Sample office forms to be used in the position
4. Summaries, and possibly procedure flow charts, of procedures applicable to the position

After operation of the OSC has begun, students working in the Center, through experimentation, will identify "best ways" of performing tasks (methods). These methods, once proved, can then be recorded and become a part of OSC job manuals.

A major use of the job manuals will be to orient a student to a new position and to instruct him not only on what work he is to do but how he is to do it. In addition, however, job manuals will be used as a valuable counselling tool in the Business Education Learning System. Because they reveal the exact nature of OSC positions, they can be used to match each student with OSC experiences (a) which he is capable of performing, and (b) which he needs to enable him to accomplish his career objective.

Office Forms

As part of the job analysis, Internship students collected some forms used by the office workers interviewed. Using these forms as guides, several students attempted to adapt and/or revise a few of the forms for use in the OSC. No acceptable forms were produced, however. It was discovered that forms design is a complex process requiring specialized knowledges and skills; therefore, detailed and in-depth exploration of the topic is necessary.

As a beginning, researchers will study forms obtained from similar office service companies. This should prove fruitful in terms of the types of forms the OSC must have in order to begin operation.

It is hoped that a specialist in forms design (such as a representative from Moore Business Forms, Inc.) can be brought in to help researchers acquire the necessary knowledges and develop the skills required to prepare effective office forms. The consultant will be informed by researchers of the nature of office work to be done in the OSC and also of any procedures which may have been developed. He will then be asked to make recommendations regarding (a) the types of forms needed and (b) the design for the necessary forms.

At least one experimental form will then be submitted, by researchers, to the consultant for analysis and critique. The form will then be revised based on the consultant's reactions. This experience should enable researchers to develop other forms for OSC use.

Even after OSC operation has begun, improvements in office forms will continue to be made. Systems and Procedures Analysts, in cooperation with employees in the Instructional Materials Department, may design additional office forms as they are discovered to be necessary for efficient operation of the Center. OSC "workers" will also participate, since Method-Time Measurement procedures may be applied to several variations of a form to decide which variation will result in greater productivity.

Office Manual

During the spring of 1972, senior students, under the guidance of one of the researchers, will formulate policies to govern OSC employees as they participate in an experimental "trial run" OSC operation.

During part of the semester, students will play the role of members of an OSC planning team; during other parts of the semester, they will actually perform in assigned positions within the Center.

When acting as members of the OSC planning team, students will develop the company policies, regulations, and rules which will be applicable to all employees. Topics such as absenteeism, wage increases and promotions, safety, sick leave, insurance, fringe benefits, job training, and job classifications will be deliberated.

Experimentation with these policies, rules, and regulations will take place when students change roles--from that of OSC planners to employees of an operating OSC. In their roles as managers or workers, they can evaluate the decisions they made when acting as members of the OSC planning team. Hard-to-enforce policies, rules, and regulations will become immediately obvious.

As a result of the experimental OSC operation, it will become obvious which policies, rules, and regulations should be revised or deleted. Those determined to be acceptable will be incorporated into an office manual.

Before researchers attempt to prepare an office manual, however, several will be obtained for review. Particular attention will be paid to:

1. Appropriate topics to be included
2. Extent of detail presented on important topics
3. Number and types of illustrations
4. Writing style
5. Format

Researchers may use "How to Prepare an Office Manual," a publication available through the Administrative Management Society, Willow Grove, Pennsylvania, as a guide.

V. PLANS FOR FURTHER DEVELOPMENT OF BELS
(FALL, 1971, THROUGH SUMMER, 1972)

Information presented earlier in the report has revealed the work accomplished thus far. The following list shows the sequence of activities which, at this time, researchers believe should be funded in order to further develop the BELSystem.

Fall, 1971, and Spring, 1972

A. Determine course outline for each BELS course and obtain approval for implementation

B. Determine competency tests (to be used in Office Production course) for each OSC position

1. Determine behavioral objectives
2. Determine success criteria
3. Investigate tests available for possible use
4. Choose and/or prepare appropriate competency tests

C. Develop BELS task list for the OSC from "work to be performed" statements reported in local job analysis

D. Develop task lists, by position, considering decisions involving centralization vs. decentralization, etc.

E. Prepare OSC-related materials

1. Office procedures and procedures flow charts
2. Job manuals
3. Office forms
4. Office manual

F. Plan changeover from present traditional Business Education program at Texas Tech University to exemplary BELS program

G. Investigate instructional materials applicable to BELS

1. Obtain and review commercially prepared instructional materials software and hardware

    a. Identify needs based on consideration of tasks
    b. Determine type (slides, films, filmstrips, multi-media packets, etc.)
    c. Develop selection criteria
    d. Obtain instructional materials for review
    e. Review instructional materials
    f. Evaluate instructional materials reviewed

   g. Make tentative recommendations
   h. Determine hardware

2. Investigate possibilities related to preparation of instructional materials

   a. Identify tasks for which there are no appropriate commercially prepared materials
   b. Determine media for presentation (printed, audio, visual, audiovisual)
   c. Investigate possibilities for local preparation of multi-media kits
   d. Prepare some scripts for multi-media kits
   e. Submit scripts to several companies for professional development
   f. Compare commercially prepared multi-media kits and select a company to work with in the future

H. Work with consultants on:

1. Behavioral objectives (See Item B)
2. Task analysis (Items B and C)
3. Testing (Item B)
4. NOBELS (Item C)
5. Job analysis (Item C)
6. Systems and procedures (Item E)
7. Forms design (Item E)
8. Instructional strategies (Items A, F, and G)
9. Preparation of instructional materials (Items G and AA)
10. Curriculum evaluation (Item I)

I. Plan procedure to evaluate exemplary program

J. Operate abbreviated trial run of OSC, Spring 1972

K. Analyze and revise OSC-related materials (See Item E), based on trial run experience of OSC

L. Establish and meet with Business Advisory Committee

M. Prepare magazine articles about BELS

N. Contact potential organizations for future advisory and financial support (especially for Office Research Institute)

O. Prepare feasibility and planning proposal for NOBELS, Phase II

P. Plan other (outside the BELS core) Business Education Department course offerings

Summer, 1972

AA. Conduct Instructional Materials Institute

BB. Prepare simulated work

VI. PROJECT PERSONNEL

The table below shows the name of each person contracted to work on the project, his academic rank at Texas Tech University, his assigned title on the project, the length of his contract period, and the percent time he worked.

TABLE 3

PROJECT PERSONNEL

Name and Academic Rank	Project Title	Work Period	% Time
William R. Pasewark Professor	Project Director	5/30/71 - 7/9/71 7/10/71 - 7/31/71	100 50
Ronald D. Johnson Associate Professor	Investigator	5/30/71 - 7/9/71	25
Dolores Kilchenstein Assistant Professor	Investigator	5/30/71 - 7/31/71	100
Ruth Goss Part-Time Instructor	Research Assistant	1/2/71 - 5/29/71 5/30/71 - 7/31/71	25 50
Allene Finley Part-Time Instructor	Secretary	7/12/71 - 7/18/71	100
	Research Assistant	7/19/71 - 7/31/71	100
Juanita Kiesling Teaching Assistant	Research Assistant	5/31/71 - 7/9/71	50

APPENDIX A

GLOSSARY

ABILITY: Power to perform resulting from any one or a combination of the following ingredients: knowledges, skills, and/or attitudes.

ATTITUDE: A way of thinking acting, or feeling; a mental disposition or mind set.

BEHAVIORAL OBJECTIVE: A performance goal stated in terms of observable and assessable achievement.

BUSINESS EDUCATION LEARNING SYSTEM (BELS): A comprehensive, competency based design which incorporates educational learning experiences and interaction with business and which can be analyzed and synthesized through feedback circuitry made possible by its closed loop structure.

COMPETENCY: Skills, knowledges, and/or attitudes evidenced in behavior which constitutes satisfactory performances measured by success criteria.

COMPETENCY-BASED CURRICULUM: A planned sequence of educational experiences incorporating learning units for which success criteria have been previously determined and against which students' behaviors can be measured. The behaviors necessary to constitute satisfactory performance in jobs representing the students' career objectives serve as the basis for determining success criteria.

COOPERATIVE OFFICE EDUCATION PROGRAM: A coordinated program of instruction where the student receives on-the-job work experience and classroom instruction combined to reach employment objectives in office occupations.

DIRECTED PROGRAM: A coordinated program involving the school offices and the business department. The student receives work experience at the school under close supervision of the business teacher-coordinator, as well as related learnings in the classroom that leads to a career objective in office occupations.

GENERATED TASK: Work created by the normal internal operations necessary to operate the Office Service Center.

GOAL: Same as OBJECTIVE

HARDWARE: Materials of wood, metal, or harder consistency. (Example: Office machines.)

INTEGRATED EXERCISE: A project carefully planned to necessitate the application of specific previously learned skills, knowledges, and/or attitudes in the performance of the work assigned.

JOB: Same as POSITION

JOB ANALYSIS: The process of gathering information and determining all the elements involved in performing a specific job. May be used to identify a systematic effort to get work done in one best way, by the best qualified person, and at the fairest wage and salary that will produce the largest volume of satisfactory work.

JOB DESCRIPTION: An outline of the informational data compiled from the job analysis, presented in an organized form that identifies and describes the contents of a specific job or position.

JOB EVALUATION: The procedure of classifying, ranking, and grading of jobs in order to set a monetary value for each specific job in relation to other jobs.

JOB MANUAL: A reference source which includes specific information about all the tasks performed by one person in a specific job.

JOB SPECIFICATION: A detailed record of a worker's qualifications for a specific job. The job specification is sometimes combined with the job description.

KNOWLEDGE: The perception, understanding, and/or acquaintance of or with information; introspective assimilation of facts, concepts, information.

LIVE WORK: Work sent to the Office Service Center from on and off campus to be performed for a fee.

METHOD: A systematic, planned, organized sequence of steps followed in the performance of a task. Methods have to do with the how tasks are performed, not with what task is to be done, who will do it, or when. (Example: In processing orders, there is a method for: (1) acknowledging the incoming order, (2) checking the credit status of the customer, (3) preparing the sales invoice, and (4) distributing the copies of the invoices.)

MODEL OFFICE: The simulation of the organization, system, conditions, and major jobs of a particular, actual office. Same as SIMULATED OFFICE.

NOBELS: New Office and Business Education Learnings System. A federally funded, long-range curriculum renewal project concerned with assessing and modifying learning programs proposing to prepare workers for office jobs.

OBJECTIVE: The end toward which effort is directed. Same as GOAL.

OFFICE: The focal point for coordinating the service and profit-making activities of a business enterprise.

OFFICE MANUAL: A reference source which includes general information about the overall operation of the office and which states company policies applicable to all office personnel.

OFFICE SERVICE CENTER (OSC): An on-campus profit-oriented business in which sophomore degree and non-degree students perform "live" work from offices on campus and from businesses off campus under the supervision of senior degree students who serve as managers.

PERFORMANCE-BASED CURRICULUM: A planned sequence of educational experiences designed on the basis of tasks performed on the jobs which represent the career objectives of the students in the program.

PERFORMANCE GOAL: A clearly defined terminal objective (a) which is stated in terms of the behavior expected of the learner at the end of an educational experience, and (b) which provides a criteria of success for the assessment of achievement.

PERSONAL QUALITIES: Includes personality traits (the impression we make on others), character traits (what we really are), and grooming (our personal appearance).
Personality trait examples: Cheerful, sullen
Character trait examples: Honest, accurate
Grooming examples: Slovenly, neat

POLICIES: Basic guides to action resulting from managerial action; they are the what management wants. Policies are tools of management; they should be the result of stable and consistent decisions based on a recurring decision on a recurring problem. Policies set forth the boundaries within which activities are to take place; however, policies permit planning and decision-making within the prescribed limits of the policy. (Example: Purchasing each year a quantity of office machines based on an amount determined by a percentage of net sales.)

POSITION: Group of tasks making up the duties of an employee. (Example: Secretary, Manager, Administrative Assistant) Same as JOB.

POSITION SIMULATION: A structured, in-class learning environment which gives the student opportunity to perform all of the tasks typically associated with a particular job title. Ex: legal secretary.

PROCEDURE: A systematic, planned, organized sequence of related methods of task performance, the "how" of accomplishing a process.

PROCESS: A unit of office work into which a group of related tasks are organized. The performance of a process usually involves more than one person at more than one work station. The following processes are involved in the sales system: (1) processing an order, (2) shipping the goods, (3) accounting for the shipment, (4) receiving payment for the sale, (5) handling claims and adjustments, and (6) analyzing the sales.

SIMULATED OFFICE: Same as MODEL OFFICE.

SIMULATED TASK: An isolated task assigned to the student as an educational project. Example: Preparing a travel itinerary.

SIMULATED WORK: Those artificial tasks deliberately injected into OSC to provide student personnel with experiences considered essential in their educational preparation but which cannot be provided through the processing of the "live" work submitted.

SIMULATION: An instructional strategy designed to teach the student what to do with what he already knows. Simulation provides a setting in which the student can integrate acquired abilities in a controlled, yet "unclassroomlike," environment. This environment provides opportunity for the student to develop dormant abilities into compentencies through performance in a realistic work setting.

SKILL: Any process, mental or physical, which improves or develops to a higher level through repeated application of distinctive technique.

SOFTWARE: The programs, policy manuals, catalogs, or references used. (Example: Policy manual.)

SYSTEM, BUSINESS: A complete network of the personnel, forms, records, machines, and equipment involved in completing a major phase of office work. (Example: A sales system that involves the forms, personnel, equipment, and records necessary to complete a sale from the date the order is received until the goods are shipped and payment is received.)

TASK: A unit of office work which (a) is important enough to be one of the assigned duties or responsibilities of a particular office position, (b) is performed by a single worker, (c) results in an identifiable and significant accomplishment or end result, and (d) can be divided into a sequence of organized steps of performance.

TASK ANALYSIS: An analytical and systematic study of the behavioral requirements of a task from which is derived the office and business educational learnings prerequisite to performance; the process by which specific educational requirements are identified for the performance of a particular task.

APPENDIX B

JOB ANALYSIS

A. Prior to Interview

1. OSC position
2. Analyst's name
3. Date Course Semester
4. Official title of job analyzed
5. Name of person on job
6. Department
7. Company name
8. Product or service it sells
9. Address Phone

B. Supervisor Interview

1. Name of supervisor Position
2. General purpose of worker's job to be analyzed

3. Are written specifications available? (Circle one) Yes No
   If "Yes,":
   a. attach specification sheet
   b. are they realistic?
   c. are they followed?

4. What are the important competencies you seek for the person in this position?

5. Are there any special physical, mental, and/or emotional demands for the job? Please list them.

6. Are any employment tests given for this position? Yes No If "Yes," please list.

7. Are there opportunities for promotion? Yes No If "Yes," please describe.

8. Is an organization chart available? Yes No If "Yes," please attach one.

9. Is an office manual available? Yes No If "Yes,":
   a. is it effective?
   b. when was it originated?
   c. request one.

10. What level of education and/or work experience is necessary for this job?

11. Is there any other pertinent information that would be helpful for me to understand this position?

C. Worker Interview

1. Name of worker

2. List the most important tasks performed on this job.

3. What are the most difficult tasks? Why are they difficult?

4. What are the least difficult tasks? Why are they the least difficult?

5. What machines and other equipment are used?

   a. Daily

   b. Occasionally

6. List names of office forms used on the job. (Request samples)

7. What is the approximate amount of supplies used for one month?

Supply	Amount

8. Does the job entail supervising other jobs? Yes No If "Yes," list jobs.

9. Are there written instructions to help you perform your job?
   Yes No If "Yes," request them.

10. Is there any other pertinent information that would be helpful
    for me to understand this position?

APPENDIX C

JOB INFORMATION

Position____________________

Department__________________

Dictionary of Occupational Title (DOT) Number_______Title_______________
U. S. Office of Education Number_______Title___________________________

This job information is based on an analysis of the following positions:

Position	Company	City	Date

1. Description of position

2. Monthly salary____________________

3. Tasks performed

Daily	Weekly	Monthly

4. Competencies needed for this position

Skills

Knowledges

Personal Qualities

5. Education and/or work experience required

Education

Minimum
Preferred

Experience

Minimum
Preferred

6. Special physical, mental, and/or emotional demands

7. Machines and other equipment used

Daily	Occasionally

8. Employment tests to be taken

Written	Performance	Oral

9. Specific names of office forms used

10. Supervision of other OSC positions

---

11. Job Information prepared Date________________________

12. Job Instructions prepared Date________________________

APPENDIX D

OFFICE PRODUCTS CATEGORIZATION

One of the problems confronting business teachers is keeping informed about the tools of the office.

Office supply companies have experienced a phenomenal growth in recent years. All indications point to continued expansion of present materials and the introduction of many new products. Office supply houses furnish instructive and attractive literature about their products that are valuable resources.

This is a categorization of office materials. It can serve as the basis of a subject file to classify advertising literature and notes about office products. The main headings may be used as primary and secondary guides or miscellaneous folders, and the name of the product can be the individual folder in a subject file system.

A. Appliances

- Collators
  - Automatic
  - Manual
    - Bins
    - Racks
  - Mechanical
- Copyholders
  - Forward reading
- Correspondence trays
- Counters
  - Coin
  - Paper
- Folders, paper
- Form registers
- Joggers
- Numbering and dating stamps
- Paper cutter
- Paper punches
- Pencil sharpeners
- Posting trays
- Rubber stamps
- Scissors
- Sorters
  - Trays
  - Racks
- Staplers
  - Electric
  - Manual
- Time clocks

B. Equipment

- File cabinets
  - Horizontal
  - Vertical
    - Letter
    - Stencil
- Intercommunication systems
- Safes
- Waste baskets
- Water coolers

C. Furniture

- Ash stands and trays
- Bookcases
- Cabinets and lockers
- Chairs
- Clothing racks
- Desks
  - Calculating
  - Clerical
  - Executive
  - Secretarial
  - Typewriting
- Lamps
  - Desk
  - Floor
- Tables

D. Machines

- Bookkeeping and Accounting
    - Calculating
    - Calculating and typewriting
    - Punch card
        - Center punches
        - Marginally punched
- Calculating
    - Mechanical
        - Listing
            - Ten-key
                - Printing calculator
                - Standard
            - Full keyboard
                - Cash register
                - Movable carriage
                - No carriage
        - Non-listing
            - Key-driven
            - Rotary
                - Manual
                - Fully automatic
                - Semi-automatic
    - Electronic
        - Listing
        - Non-listing
- Copiers
    - Diazo
    - Infrared
    - Diffusion-Transfer
    - Dye-Transfer
    - Electrostatic
- Dictating and Transcribing
    - Cylinder
    - Disc
    - Sleeve or belt
    - Tape
    - Wire
- Duplicating
    - Fluid
    - Gelatin
    - Offset
    - Stencil
    - Typeset
- Mailing
    - Addressing
        - Fiber plates
        - Metal plates
    - Envelope openers
    - Scales
    - Sealing and postage affixers
    - Time stamps
- Typewriters
    - Automatic
    - Electric
    - Long-carriage
    - Noiseless
    - Portable
    - Standard
    - Vari-typer

E. Supplies

- Binders
    - Catalog
    - Paper
- Carbon paper
- Envelopes
- Erasers
- Filing
    - Cards
    - Folders
    - Guides
    - Labels
    - Tabs
- Forms, business
- Gummed tape
    - Cellulose
    - Paper
- Ink
    - Writing
    - Stamp Pad
- Moisteners
- Paper
    - Accounting
    - Duplicating
    - Typewriting
- Paper attachers
    - Clips
    - Fasteners
    - Pins
    - Staplers
    - Thumb tacks
- Paste and mucilage
- Pens
- Pencils
    - Mechanical
    - Wood cased lead
- Ribbons
    - Carbon paper
    - Cloth
- Rubber bands
- Stamp pads

APPENDIX E

STUDENT QUESTIONNAIRE

Classification____________________________ Age_________________________

Major: ____Agri. Sci. ____Arts & Sci. ____Bus. Ad. ____Educ. ____Engin.

____Home Econ. Sex______________

1. Approximately how many term papers, themes, book reports, theses, or case studies have you written this year?______________

2. Approximately how many times in a semester do you use punched cards?__________

3. Following is a possible list of services provided by a student office services center. Please place, in the space provided beside each service, the number of times you will personally use that service in a semester if the prices are competitive. If you do not plan to use a particular service, leave the line beside that service blank.

Typing

____Theses
____Term papers
____Book reports
____Letters
____Resumes
____Data sheets
____Ditto Masters
____Theses or dissertations
____Invitations
____Notes
____Agendas
____Hand-outs
____Proofreading
____Other. Please specify______
____

Transcription

____Transcription from tapes
____Dictation to a secretary
____Other. Please specify______
____

Telephoning

____Using an answering service
____Calling to notify of meetings, etc.
____Conducting telephone surveys
____Other. Please specify________
____

Filing

____Filing research data
____Sorting material for filing
____Setting up a filing system
____Other. Please specify________
____

Keypunching

____Punching cards for class projects
____Punching cards for research projects
____Other. Please specify________
____

Mailing

____Wrapping packages
____Addressing letters, cards,
____Addressing pamphlets, newspapers, circulars
____Addressing invitations
____Other, Please specify________
____

Reproducing

____Duplicating all types of materials: hand-outs, letters, reports, invitations, announcements, advertisements, etc.
____Collating & stapling materials
____Other. Please specify________
____

4. Estimate when you will be bringing most of your work to the student office services center during the semester.

____At the beginning of the semester
____At midterm
____At the end of the semester
____Evenly distributed throughout the semester

5. Rank the following features to indicate the ones you would consider most important if you brought work to the student office services center. Please use the numbers 1 through 4, where 1 indicates the feature you consider most important.

____Accuracy
____Speed
____Neatness
____Reasonable prices
____Other. Please specify________________________________

6. If prices were competitive, would you use the student services center?
Yes____No____ If no, indicate why not.

____I do my own work.
____I don't have any classes that assign that kind of work
____I have a friend or a member of my family who does my work
____Other. Please specify________________________________

APPENDIX F

TALLY SHEET

Name________________________________

Class (Name & No.)________________________________ Day______ Time______

No. of questionnaires________________________________

Classification: ____Fr. ____Soph. ____Jr. ____Sr.

Age:
____17-21
____22-24
____25-27
____28-30
____31-50
____51-70

Major:
____Agri. Sci.
____Arts & Sci.
____Bus. Ad.
____Educ.
____Engin.
____Home Econ.

Sex: ____Female ____Male

---

1. ____Female
____Male

____Fr.
____Soph.
____Jr.
____Sr.

____Agri. Sci.
____Arts & Sci.
____Bus. Ad.
____Educ.
____Engin.
____Home Econ.

---

2. ____Female
____Male

____Fr.
____Soph.
____Jr.
____Sr.

____Agri. Sci.
____Arts & Sci.
____Bus. Ad.
____Educ.
____Engin.
____Home Econ.

---

4. ____At the beginning of the semester
____At midterm
____At the end of the semester
____Evenly distributed throughout the semester

---

5. Total

Rank----	1	2	3	4
Accuracy				
Speed				
Neatness				
R. Prices				

Male					Female			
4	3	2	1		1	2	3	4
				Accuracy				
				Speed				
				Neatness				
				R. Prices				

Rank No. (1)	F.	S.	J.	S.
Accuracy				
Speed				
Neatness				
R. Prices				

Rank No. (2)	F.	S.	J.	S.
Accuracy				
Speed				
Neatness				
R. Prices				

Rank No. (3)	F.	S.	J.	S.
Accuracy				
Speed				
Neatness				
R. Prices				

Rank No. (4)	F.	S.	J.	S.
Accuracy				
Speed				
Neatness				
R. Prices				

6. Fr. ____Yes ____No
Soph. ____Yes ____No
Jr. ____Yes ____No
Sr. ____Yes ____No

Female ____Yes ____No
Male ____Yes ____No

17-21 ____Yes ____No
22-24 ____Yes ____No
25-27 ____Yes ____No
28-30 ____Yes ____No
31-50 ____Yes ____No
51-70 ____Yes ____No

	Male	Female
____1. I do my own work.		
____2. I don't have any classes that assign that kind of work.		
____3. I have a friend or a member of my family who does my work.		
____4. Other, please specify________		

7.

Total	Fr	Soph	Jr	Sr		Male	Female	
								Typing Themes
								Term papers
								Book reports
								Letters
								Resumes
								Data sheets
								Ditto masters
								Theses or dissertations
								Invitations
								Notes
								Agendas
								Hand-outs
								Proofreading
								Other. Please specify________
								Transcription Transcription from tapes
								Dictation to a secretary
								Other. Please specify________
								Mailing Wrapping packages
								Addressing letters, cards
								Addressing pamphlets, newspapers, circulars
								Addressing invitations
								Other. Please specify________
								Telephoning Using an answering service
								Calling to notify of meetings, etc.
								Conducting telephone surveys
								Other. Please specify________
								Filing Filing research data
								Sorting material for filing
								Setting up a filing system
								Other. Please specify________
								Keypunching Punching cards for class projects
								Punching cards for research projects
								Other. Please specify________
								Reproducing Duplicating all types of materials: hand-outs, letters, reports, invitations, announcements, advertisements
								Collating & stapling materials
								Other. Please specify________